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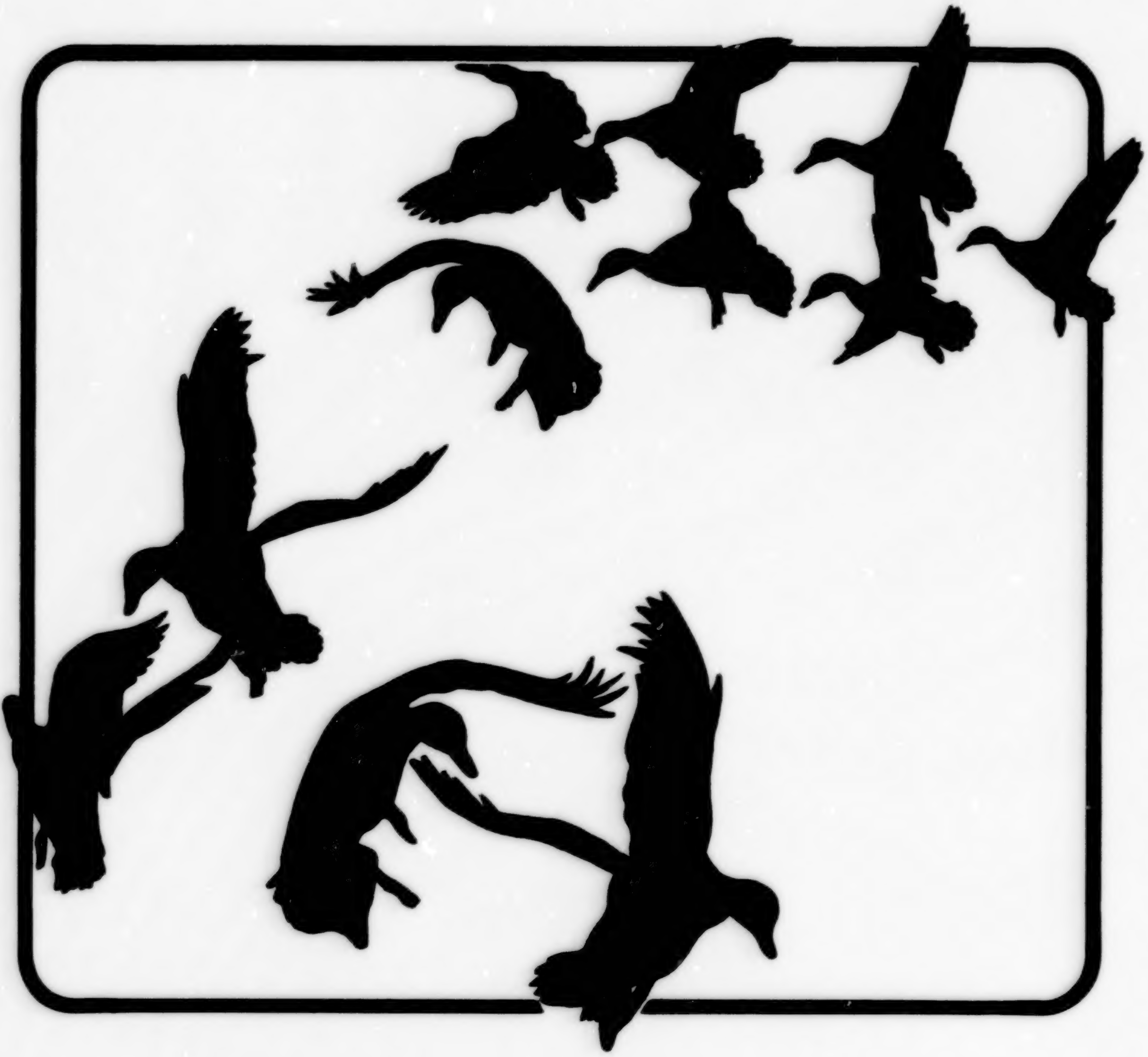
AVIAN CHOLERA AND RELATED TOPICS: AN ANNOTATED BIBLIOGRAPHY



Fish and Wildlife Service

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Biological Report 88(40)
September 1988

AVIAN CHOLERA AND RELATED TOPICS:
AN ANNOTATED BIBLIOGRAPHY

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INTRODUCTION

In 1979, Sonoma S. Wilson, working for the renowned wildlife researcher, Wayne I. Jensen, published a bibliography of references to avian cholera. That bibliography was limited to avian cholera; it was not annotated; it contained journal articles, abstracts, proceedings, book chapters, and dissertations; and its author claimed to have included every significant reference to avian cholera. This bibliography includes references to nonavian disease syndromes caused by Pasteurella multocida and related bacteria, is annotated for the most part, contains only scientific journal articles (with a few exceptions of special importance to avian cholera in wild waterfowl), and its authors make no claim of completeness.

We have included most of the articles presented in the original bibliography, excepting abstracts, book chapters, dissertations, and most proceedings. Citations were obtained through computer searches of the BIOSIS Previews, CAB Abstracts and AGRICOLA data bases, reference lists in journal articles, and files of colleagues. The data base searches extended from 1970 through 1987. Where possible, the accuracy of the citation was verified by examination. However, as many of the articles were obtained through inter-library loan, the original journal was often not available for examination.

Where conflicts existed between the original article and a data base citation as to the spelling of an author's name, page numbers, or a title--these conflicts are not rare--we adopted the presentation found in the original article. All remaining errors in the citations are the responsibility of the authors.

Most of the annotations were written by us, although very short abstracts provided by either the authors or the bibliographic services were used in some cases. If the original article was not seen, it is marked (ONS)--original not seen. If an article is not in English, the language is indicated, followed by /E if there is an English abstract.

Several indices follow the bibliography. In addition to an extensive general index of keywords, we have provided separate indices of geographic locations, scientific names, and common names.

This bibliography was prepared using the Reference Manager bibliographic data base software from Research Information Systems (mention of trade names does not constitute endorsement or recommendation by the U.S. Fish and Wildlife Service). The software provides Boolean search capabilities using combinations of the 1,411 keywords, 2,004 authors names, 78 publication years, 374 journal names, or the reference number assigned to each citation. The data base is available on computer disk for those with the required hardware (IBM-PC or compatible with a hard disk) and software.

We gratefully acknowledge the staff of the Steenbock Memorial Library, University of Wisconsin, Madison, for their assistance in organizing the data base searches and, especially, for their dedication in searching North America for hundreds of articles.

BIBLIOGRAPHY

1. Absalyamov, I.F. 1965. Pathomorphology of duck pasteurellosis (Russian). Trudy Vsesoyuznogo Instituta Eksperimental'noi Veterinarii 31:174-179.

   Keywords: duck, pathology, histopathology

   Notes: (ONS)

2. Achkurin, B.S. 1956. The experimental prophylaxis and therapy of chicken pasteurellosis with penicillin (Russian). Ptitsevodstvo 1956(1):40.

   Keywords: antibiotic, chicken, treatment, therapy

   Notes: The treatment and prevention of avian cholera in chickens with penicillin are discussed.

3. Ackerman, H.W. and L. Karaivanov. 1984. Morphology of Pasteurella multocida bacteriophages. Canadian Journal of Microbiology 30(9):1141-1148.

   Keywords: bacteriophage, serology, strain comparison, electron microscopy

   Notes: Bacteriophage AU, C-2, 32, and 22 correspond to four different phage species by electron micrograph and serological analysis.

4. Adamesteanu, I., C. Adamesteanu, V. Salantiu, Z. Trica, S. Ghergariu, M. Salcudeanu and T. Rusu. 1966. A combination of citrated blood, terramycin and triturated hematopoietic organs in the control of fowl pest (Bulgarian/E). Lucrarile Stiintific Seria: Zootehnie-Medicina Veterinara 21:147-153.

   Keywords: treatment, antibiotic, passive immunity

   Notes: The triturate treatment described was similar to sulfadimerazine in effectiveness but does not cause a decrease in egg production.

5. Adamou, L., J. Bruckler and H. Blobel. 1972. Further analyses of Pasteurella proteins by vertical polyacrylamide gel disk electrophoresis (German/E). Zentralblatt fur Veterinarmedizin, Reihe B 19B (5):412-415.

   Keywords: related bacteria, identification, electrophoresis, classification

   Notes: Distinct combinations of protein bands allowed differentiation of seventy-seven cultures of P.M. and 13 of Pasteurella haemolytica.

6. Addo, P.B. and K. Mohan. 1985. Atypical Pasteurella haemolytica type A from poultry. Avian Diseases 29(1):214-217.

   Keywords: related bacteria, serotype A, P.haemolytica, strain comparison, chicken, isolation, biochemical test

   Notes: Atypical strains of P. haemolytica that failed to ferment maltose were isolated from nodular necrosis in the liver and heart blood of domestic fowl.

7. Adlakha, S.C. 1969. Infectious coryza of poultry. Indian Farming 19(4):45-47.

   Keywords: general, related bacteria, prevention, treatment

   Notes: Preventative measures against infectious coryza in captive flocks are discussed.

8. Agaeva, E.M. 1979. Use of gel chromatography for immunochemical analysis and serological properties of fractions of the capsule antigen of Pasteurella multocida (Russian). Biulleten Vsesoyuznogo Instituta Eksperimental'noi Veterinarii 35:40-43.

   Keywords: capsular antigen, chromatography, molecular sieving, antigenicity

   Notes: The use of Sephadex G-200 column chromatography for characterization of the capsule antigen is reported.

9. Agaeva, E.M. 1979. Antigenic and type specific properties of the fractions of capsule antigen of Pasteurella multocida (Russian). Trudy Vsesoyuznogo Instituta Eksperimental'noi Veterinarii 50:95-101.

Keywords: strain comparison, capsule, capsular antigen, antigen

Notes: A serological examination of capsule antigens is presented.

10. Ahmed, O.A.R., L.D. Olson and E.L. McCune. 1974. Tissue irritation induced in turkeys by fowl cholera bacterins. Avian Diseases 18(4):590-601.

Keywords: immunization, route, adjuvant, immunity, vaccine

Notes: Irritation levels produced by different commercial avian cholera bacterins varied greatly and were independent of injection route.

11. Ahmed, O.A.R. 1970. Gross and histopathological reactions of fowl cholera bacterins in turkeys. Sudan Journal of Veterinary Science and Animal Husbandry 11(2):62-76.

Keywords: adjuvant, vaccine, turkey, granuloma

Notes: The granulomatous reaction of turkeys vaccinated with P.M. bacterins was attributed to the paraffin oil adjuvant.

12. Akulova, N.S. 1966. Comparative study of the distribution of chlortetracycline in the body of hens and ducks with experimental pasteurellosis (Russian). Trudy Vsesoyuznogo Instituta Eksperimental'noi Veterinarii 32:96-102.

Keywords: chicken, duck, antibiotic, pathogenesis

Notes: The distribution of chlortetracycline in the tissues of ducks and hens is compared.

13. Akulova, N.S. 1964. Peculiarities of chlortetracycline distribution in the organism of birds infected with pasteurellosis (Russian/E). Antibiotiki (Moscow) 9(12):1094-1096.

Keywords: antibiotic, treatment, pathogenesis

Notes: The concentration of chlortetracycline in blood serum and tissues was higher in pasteurellosis infected hens than in healthy ones.

14. Alberts, J.O. 1955. Let's hold the line against those fall health problems. Turkey World September:18,62-63.

Keywords: related bacteria, treatment, prevention, antibiotic, turkey

Notes: Fall health problems of the turkey grower including avain cholera, erysipelas and the enteritis complex are dicussed.

15. Alberts, J.O. and R. Graham. 1951. An observation on aureomycin therapy of fowl cholera in pheasants. Veterinary Medicine 46:505-506.

Keywords: antibiotic, treatment, pheasant

Notes: The effects of aureomycin in reducing losses from avian cholera are discussed.

16. Alberts, J.O. 1951. Cholera-one of your worst foes. Turkey World October:14-15, 58-61.

Keywords: general, treatment, transmission, signs

Notes: Avian cholera problems among commercial turkey breeders are discussed including signs, distribution, treatment and prevention.

17. Alberts, J.O. 1950. The prophylactic and therapeutic properties of sulfamerazine in fowl cholera. American Journal of Veterinary Research 11:414-420.

Keywords: antibiotic, turkey, treatment, immunity

Notes: Sulfamerazine was effective in reducing mortality in turkeys due to experimentally induced avian cholera.

18. Alberts, J.O. and R. Graham. 1948. Fowl cholera in turkeys. North American Veterinarian 29:24-26.

Keywords: related bacteria, case report, treatment, stress, resistance, turkey, P.avicida

Notes: Four outbreaks of avian cholera caused by Pasteurella avicida occurred in four turkey flocks.

19. Alberts, J.O. and R. Graham. 1948. Sulfamerazine in the treatment of fowl cholera in turkeys. American Journal of Veterinary Research 9:310-313.

Keywords: treatment, turkey, antibiotic, related bacteria

Notes: Sulfamerazine was found to reduce mortality during treatment of experimental and natural outbreaks of avian cholera.

20. Albritton, W.L., J.K. Setlow, M.L. Thomas and F.O. Sottnek. 1986. Relatedness within the family Pasteurellaceae as determined by

genetic transformation. International Journal of Systematic Bacteriology 36(1):103-106.

Keywords: DNA, genetic, strain comparison

Notes: (ONS)

21. Alexander, A.M. and M.A. Soltys. 1973. Relationship of serum agglutinins to protective immunity produced in turkeys immunized against fowl cholera. Journal of Comparative Pathology 83(2):191-198.

Keywords: immunogenicity, vaccine, serology, turkey

Notes: Two types of vaccines (formalinized and autoclaved) were prepared from serotypes 5:A (more virulent) and 1:A (less virulent) of P.M. The former produced a poor serological response in turkeys whereas the latter elicited a strong serological response.

22. Ali, A.B.G.M., M.S. Jayaraman and V. Purushothaman. 1984. A study on the aerobic bacteria associated with mortality in young chicks (0-2 weeks). Cheiron 13(4):178-181.

Keywords: India, related bacteria, chicken

Notes: A total of 71 isolates of *Staphylococcus epidermidis* (36.62 percent), *Staphylococcus aureus* (18.31 percent), *Escherichia coli* (18.31 percent), P.M. (8.45 percent), *Klebsiella* species (7.04 percent), *Pseudomonas aeurginosa* (5.63 percent) *Enterobacter liquefaciens* (4.23 percent) and *Hafnia* species (1.41 percent) were obtained from 101 dead chicks showing various disease conditions.

23. Ali, M.I. and M.G. Sorwar. 1975. Studies on duck cholera (pasteurellosis) vaccine. Bangladesh Veterinary Journal 9(1/4):29-30.

Keywords: vaccine, duck, immunization

Notes: A safe duck cholera vaccine gave protection under field conditions but gave inconclusive results under lab conditions.

24. Ali, M.I. 1974. Observations on the causal organism of duck cholera in Bangladesh. Bangladesh Veterinary Journal 8(1/4):25-26.

Keywords: vaccine, characterization, Pakistan, Bangladesh, duck, culture, biochemical test

Notes: The morphological, cultural, and biological characteristics of a P.M. isolate were studied and a vaccine was prepared that was successful against duck cholera in Bangladesh.

25. Allan, E.M., A. Wiseman, H.A. Gibbs and I.E. Selman. 1985. *Pasteurella* species isolated from the bovine respiratory tract and their antimicrobial sensitivity patterns. Veterinary Record 117:629-631.

Keywords: shipping fever, antibiotic sensitivity, strain comparison, cattle, P.haemolytica, related bacteria

Notes: The antibiotic sensitivity of the most commonly isolated *Pasteurella* species, *Pasteurella hemolytica*, was: chloramphenicol (100 percent), sulphamethoxazole trimethoprim (98 percent), oxytetracycline (80 percent), ampicillin (85 percent), penicillin (82 percent), streptomycin (three percent) and lincomycin (one percent).

26. Alls, A.A., G.S. Appleton and J.R. Ipson. 1970. A bird-contact method of challenging turkeys with *Pasteurella multocida*. Avian Diseases 14(1):172-178.

Keywords: immunity, vaccination method, vaccine, challenge, turkey

Notes: The immune status of birds was assessed by a natural exposure route which was reproducible and eliminated the chance of over- challenge.

27. Anderson, L.A.P., M.G. Coombes and S.M.K. Mallick. 1929. On the dissociation of *Bacillus avisepticus*. Part I. Indian Journal of Medical Research 29:611-624.

Keywords: related bacteria, smooth, rough, virulence, immunity, Bacillus avisepticus

Notes: A stable rough form of *Bacillus avisepticus* was obtained from a smooth culture. The rough form had morphologic, cultural, serologic, and immunologic properties which differed from the original smooth culture.

28. Anderson, L.A.P., M.G. Coombes, S.M.K. Mallick and C.deC. Martin. 1929. On the dissociation of *Bacillus avisepticus*. Part II. Indian Journal of Medical Research 29:625-639.

Keywords: immunity, related bacteria, strain, vaccine, Bacillus avisepticus, virulence, smooth, rough

Notes: Protection experiments were carried out on pigeons immunized with four different vaccines prepared from smooth and rough varients of *Bacillus avisepticus*.

29. Anderson, L.C., M.G. Rush and J.C. Glorioso. 1984. Strain differences in the susceptibility and resistance of *Pasteurella multocida* to phagocytosis and killing by rabbit

polymorphonuclear neutrophils. American Journal of Veterinary Research 45(6):1193-1198.

Keywords: strain comparison, immunity, serotyping, phagocytosis, rabbit, polymorphonuclear neutrophil, serotype A, serotype D

Notes: The interactions of two capsular serotype A and four serotype D strains of P.M. with rabbit polymorphonuclear neutrophils were compared in vitro, using a phagocytic and a bactericidal assay.

30. Anderson, N.G., W.C. Alpaugh and C.O. Baughn. 1974. Effect of sulfachloropyrazine in the drinking water of chickens infected experimentally with fowl cholera. Avian Diseases 18(3):410-415.

Keywords: treatment, antibiotic, chicken, sulfachloropyrazine

Notes: Sulfachloropyrazine was shown to be effective in preventing mortality of chicks experimentally infected with P.M.

31. Angus, R.D., D.J. Kelley and D.E. Pietz. 1974. The production and standardization of typing antisera for Pasteurella multocida. U.S. Department of Agriculture, Animal Plant Health Inspection Service 91-16:46-48.

Keywords: immunity, serotyping, antigen, antiserum

Notes: Antisera for identifying serotypes 1,3,4, and 5 were prepared and evaluated using established procedures. The importance of determining the immunogenic type of P.M. and standardization of the typing antisera are discussed.

32. Anonymous 1983. Serological classification of porcine strains of Pasteurella multocida from Guangdong. I. Identification of the serological type of 116 porcine strains of Pasteurella multocida with the standard capsular antigen antisera (Chinese). Guangdong Agricultural Science 5:31-33.

Keywords: swine, strain comparison, China, capsular antigen, serotyping

Notes: (ONS)

33. Anonymous 1977. New tool helps turkey producers fight fowl cholera. Animal Nutrition and Health April:17-19.

Keywords: vaccine, treatment

Notes: A lyophilized oral avian cholera vaccine showed promise in controlling fowl cholera.

34. Anonymous 1977. Broth bacterin rates better than commercial vaccine. Feedstuffs 49(19):15-17,43.

Keywords: protection, vaccine, adjuvant, turkey, immunity

Notes: In two separate trials, protection afforded turkeys by a broth bacterin was 87 percent, while that of a commercial product was 21 and 14 percent, respectively.

35. Anonymous 1976. How one state reduced its fowl cholera losses. Poultry Digest 35(412):253-254.

Keywords: treatment, turkey, vaccine, sanitation, prevention

Notes: Fifteen preventative measures recomended by the Virginia Fowl Cholera Control Program are described.

36. Anonymous 1969. Bacterins, drugs best weapons against cholera attack. Turkey World March:21-22.

Keywords: treatment, control, vaccine, antibiotic

Notes: Four disease experts recommend prevention and treatment techniques for avian cholera.

37. Anonymous 1967. Isolation of Pasteurella multocida from a snowy owl (Nyctea scandiaca), a new host record. California Fish and Game 53(3):213.

Keywords: Nyctea scandiaca, snowy owl, case report, transmission, host range

Notes: P.M. was isolated from a snowy owl possibly infected by feeding upon ducks infected with avian cholera.

38. Arevshatian, M.S. 1969. Effectiveness of monomycin in treating pasteurellosis of poultry (Russian). Veterinarya (Moscow) 5:42-44.

Keywords: antibiotic, chicken, monomycin, treatment

Notes: The use of monomycin in the control of avian cholera was tested.

39. Armstrong, W.H. and R.A. Bankowski. 1949. Sulfaquinoxaline treatment in an acute

outbreak of fowl cholera. Veterinary Medicine 44:306-307.

Keywords: antibiotic, chicken, treatment, sulfaquinoxaline

Notes: Sulfaquinoxaline in the feed was shown to be effective in reducing losses in field outbreaks of fowl cholera in laying pullets.

40. Arnbjerg, J. 1978. *Pasteurella multocida* from canine and feline teeth, with a case report of *Glossitis calcinosa* in a dog caused by *P. multocida*. Nordisk Veterinaermedicin 30:324-332.

Keywords: case report, source, cat, dog, Glossitis calcinosa

Notes: P.M. was commonly encountered in the oral cavity of dogs (55 percent) and cats (80 percent).

41. Arsov, R. 1965. The portal of infection in fowl cholera (Bulgarian). Nauchni Trudove Vissh Veterinarnomeditsinski Institute "Prof. D-r-G Pavlov" 14:13-17.

Keywords: transmission, chicken

Notes: Experiments to identify the portal of entry of P.M. are described.

42. Ashfaq, M.K. and S.G. Campbell. 1986. The influence of opsonins on the bactericidal effect of bovine alveolar macrophages against *Pasteurella multocida*. Cornell Veterinarian 76(2):213-221.

Keywords: pneumonia, cattle, macrophage, virulence, smooth, rough, opsonin, antibody, complement

Notes: Specific antibody, with or without complement, and complement alone enhanced the association of P.M. with macrophages but increased the bactericidal effect of macrophages to rough strain P.M. only.

43. Ashfaq, M.K. and S.G. Campbell. 1985. Difference in the cytocidal effect of *Pasteurella hemolytica* and *Pasteurella multocida* on bovine macrophages. Pakistan Veterinary Journal 5(2):57-60.

Keywords: macrophage, serotype 1A, exotoxin, P.haemolytica, toxin, cattle, related bacteria, serotype A, serotype B, serotype 1, serotype 2

Notes: The extracellular products of *P. haemolytica* serotypes A1 and A2, but not of P.M. serotype 1A, had a pronounced cytocidal effect on bovine macrophages.

44. Avakian, A.P., J.W. Dick, W.T. Derieux and C.W. Henry. 1986. Comparison of various antigens and their ability to detect protective antibodies against *Pasteurella multocida* using enzyme-linked immunosorbent assay. Avian Diseases 30(3):527-535.

Keywords: ELISA, immunization, serology, antigenic analysis, antibody

Notes: Plate antigens from several different sources detected different populations of antibodies formed in response to avian cholera vaccinations.

45. Avakian, A.P. and J.W. Dick. 1986. Antigenic properties of four serotypes of *Pasteurella multocida* determined by enzyme-linked immunosorbent assay. Avian Diseases 30(3):477-481.

Keywords: serotyping, antigen, ELISA, detection, strain comparison, serology, antibody

Notes: Determination of antigenic properties by ELISA showed the Clemson University strain to be the best antigen for detecting antibody.

46. Avakian, A.P. and J.W. Dick. 1985. Comparison of filter-paper-eluted whole blood with serum in fowl cholera serology using the enzyme-linked immunosorbent assay. Avian Diseases 29(4):1277-1280.

Keywords: serology, antibody, detection, ELISA

Notes: Eluates of blood, derived from whole blood dried on filter-paper strips, were an acceptable alternative to sera in ELISA for measuring P.M. antibody activity.

47. Awad, F.I., A.A. Salem and A.A. Fayed. 1976. Studies on the viability of *Pasteurella multocida* type 1 under simulated environmental conditions in Egypt. Egyptian Journal of Veterinary Sciences 13(1):57-69.

Keywords: buffalo, camel, rabbit, mice, bone marrow, water, soil, feces, urine, blood, liver, spleen, survival, Egypt, serotype 1

Notes: P.M. survived in feces for 33 days, soil for 27 days and water for 20 days.

48. Aznar, E., A. Martinez, J.J. Martinez and C. Vina. 1982. Clinical behavior of stressed and nonstressed calves inoculated with parainfluenza virus type 3 and *Pasteurella multocida* (Spanish). Revista de Salud Animal 4(2):11-24.

Keywords: cattle, vaccine, stress, parainfluenza-3 virus

Notes: (ONS)

49. Azoulay, E., G. Bouley and M.C. Blayo. 1981. Effects of nitric oxide on resistance to bacterial infection in mice. Journal of Toxicology and Environmental Health 7(6):873-882.

    Keywords: nitric oxide, resistance, mice, immunosuppression

    Notes: (ONS)

50. Baba, T. 1984. Cell-mediated immune protection in chickens against Pasteurella multocida. Research in Veterinary Science 36(2):225-230.

    Keywords: immunity, cellular immunity, chicken, lymphocyte, macrophage

    Notes: The protective immunity of chickens against P.M. was dependent on mediators such as the macrophage activating factor from T lymphocytes.

51. Baba, T., T. Ando and M. Nukina. 1978. Effect of bursectomy and thymectomy on Pasteurella multocida infection in chickens. Journal of Medical Microbiology 11(3):281-288.

    Keywords: thymectomy, bursectomy, chicken, immunity, agglutinin, bursa of Fabricius, humoral immunity, antibody

    Notes: Surgical and hormonal bursectomies carried out before vaccination impaired the production of agglutinins and immunoglobulins but not resistance. Surgical thymectomy did not impair the production of agglutinins and immunoglobulins but resistance was diminished.

52. Baba, T. 1977. Immunogenic activity of a ribosomal fraction obtained from Pasteurella multocida. Infection and Immunity 15(1):1-6.

    Keywords: antigen, ribosome, vaccine, lipopolysaccharide, mice, chicken

    Notes: Cell fractionation of P.M. yielded a ribosomal fraction that exhibited protective antigenicity in mice and chickens that another bacterial cell fraction and endotoxin did not elicit.

53. Baba, T. and Y. Bito. 1966. Studies on the toxin of Pasteurella multocida (Japanese/E). Japanese Journal of Bacteriology 2(12):711-714.

    Keywords: toxin, pathogenesis, mice, toxin purification, chromatography, electrophoresis

    Notes: A protein toxin was isolated from an avian strain of P.M., using mouse toxicity to follow the purification by various precipitation, chromatography and electrophoresis techniques.

54. Babiuk, L.A., M.J.P. Lawman and G.A. Gifford. 1788. Use of recombinant bovine alpha 1 interferon in reducing respiratory disease induced by bovine herpesvirus type 1. Antimicrobial Agents and Chemotherapy 31(5):752-757.

    Keywords: interferon, recombinant, cattle, herpesvirus, treatment

    Notes: (ONS)

55. Backstrand, J.M. and R.G. Botzler. 1986. Survival of Pasteurella multocida in soil and water in an area where avian cholera is enzootic. Journal of Wildlife Diseases 22(2):257-259.

    Keywords: ecology, pathogenesis, survival, soil, water, reservoir, waterfowl

    Notes: Studies of naturally and experimentally contaminated soil and water at a site containing two waterfowl ponds on poorly drained, siltic clay loam showed that detectable concentrations of P.M. fell rapidly, with or without competing organisms.

56. Baharsefat, M., I. Aarabi, M. Hedayati, M. Ardehali, H. Darakhchan and A. Mirkarimi. 1976. Active immunization with a combined vaccine against hemorrhagic septicemia (pasteurellosis) and against symptomatic anthra (black quarter) of cattle in Iran caused by Pasteurella multocida and Clostridium chauvoei repectively (French/E). Archives de l'Institut Razi 28:51-56.

    Keywords: cattle, vaccine, immunity, Clostridium chauvoei, combined vaccine, Iran

    Notes: A vaccine was tested that satisfactorily protected cattle against hemorrhagic septicemia and "black quarter".

57. Bain, R.V.S. and K.W. Knox. 1961. The antigens of Pasteurella multocida type I. II. Lipopolysaccharides. Immunology 4:122-129.

    Keywords: Asia, Australia, lipopolysaccharide, serotype 1, antigenic analysis

    Notes: Lipopolysaccharides were extracted from Asian strains of P.M. and the component sugars were identified. The Australian strain yeilded a lipopolysaccharide of different properties.

58. Bain, R.V.S. 1957. A note on some *Pasteurella* types in Australian animals. Australian Veterinary Journal 33:119-121.

Keywords: serotyping, strain comparison, cattle, chicken, Australia, serotype 1, serotype 2, serotype 3, serotype 4, related bacteria, P.haemolytica

Notes: Serotypes 1, 2, 3, and 4 were isolated in Australia along with other unidentified types and *P. haemolytica*.

59. Bairey, M.H. 1975. Immune response to fowl cholera antigens. American Journal of Veterinary Research 36(4):575-578.

Keywords: vaccine, immunity, serotype 1, immunization, chicken, serotype 3

Notes: Experimentally prepared and commercially manufactured bacterins were evaluated by a 2-stage bird protection bioassay; 90 percent of the commerical bacterins gave acceptable protection levels to P.M. type 1, while 67 percent produced acceptable protection to P.M. type 3. Survival of 75 percent was considered acceptable protection.

60. Bajwa, R.S. and J. Singh. 1977. Studies on the effect of prolonged administration of sulphadimethoxine and sulphamethoxypyridazine on the growth rate and haematology of chicks. Indian Journal of Animal Sciences 47(10):692-693.

Keywords: coccidiosis, sulfadimethoxine, sulfamethoxypyridazine, hematology, growth, chicken, treatment, antibiotic, sulfonamide, secondary effect

Notes: The hematology of chicks was not affected by adminitration of two sulfonamides for 21 days. The growth rate was unaffected for the first 12 days of treatment but was subsequently depressed

61. Baldrias, L., A.J. Frost and D. Oboyle. 1988. The isolation of *Pasteurella*-like organisms from the tonsillar region of dogs and cats. Journal of Small Animal Practice 29(1):63.

Keywords: dog, cat, reservoir, isolation, bite

Notes: (ONS)

62. Baljer, G., S. Chorherr and A. Mayr. 1982. Efficacy and harmlessness of *Pasteurella multocida* vaccines based on inactivated bacteria after subcutaneous, oral and intranasal application in mice (German/E). Zentralblatt fur Veterinarmedizin, Reihe B 29(4):275-283.

Keywords: immunization, dosage, inactivation, vaccine administration, mice

Notes: The efficacy of P.M. vaccines was independent of the inactivation or application procedure used.

63. Banerji, T.P. and R. Mukherjee. 1953. Nutritional requirements of *Pasteurella septica*. Current Science 6:177-178.

Keywords: related bacteria, growth requirement, medium, culture, P.septica

Notes: Synthetic growth factors replaced biological products in media supporting growth of *P. septica*.

64. Bangun, A., J.L. Johnson and D.N. Tripathy. 1987. Taxonomy of *Pasteurella anatipestifer*. 1. DNA base composition and DNA-DNA hybridization analysis. Avian Diseases 31(1):43-45.

Keywords: DNA, DNA hybridization, related bacteria, P.anatipestifer, taxonomy, strain comparison

Notes: DNA-DNA hybridization experiments and guanisine-plus-cytosine content comparisons showed that *P. anatipestifier* was genetically unrelated to *Moraxella nonliquefaciens*, *Moraxella bovis*, P.M., *P. haemolytica*, *P. gallinarum*, *P. pneumotropica* and *P. ureae*.

65. Bangun, A. and D.N. Tripathy. 1987. Taxonomy of *Pasteurella anatipestifer*. 2. Cellular fatty-acid profile by gas chromatography. Avian Diseases 31(1):46-51.

Keywords: related bacteria, P.anatipestifer, fatty acid, identification, taxonomy, gas chromatography, chromatography

66. Bapat, J.A., A.N. Sawhney and A.H. Jabalpur. 1973. Toxicity of capsular and somatic antigens of *Pasteurella multocida*. Jawaharlal Nehru Krishi Vishwa Vidyalaya Research Journal 7(3):179-180.

Keywords: chicken, antigen, toxicity, capsular antigen, somatic antigen

Notes: Capsular antigen from an avian strain of P.M. was found to be more toxic than somatic antigen.

67. Bapat, J.A. and A.N. Sawhney. 1973. Studies on the somatic antigens of *Pasteurella multocida*. II. Protective role of passively acquired antibodies against somatic antigens in chickens. Jawaharlal Nehru Krishi Vishwa Vidyalaya Research Journal 7(1):52-55.

Keywords: immunity, chicken, passive immunity, capsular antigen, somatic antigen

Notes: The nature of factors producing protection varied for different host species. The protective capacity of P.M. was dependent on both somatic and capsular antigens.

68. Bapat, J.A., A.N. Sawhney and R.P. Awadhiya. 1973. Studies on the pathology of experimental fowl cholera. Jawaharlal Nehru Krishi Vishwa Vidyalaya Research Journal 7(3):118-119.

Keywords: pathology, chicken

Notes: The gross and histopathological changes in the tissues of chickens infected with P.M. are reported.

69. Bapat, J.A. and A.N. Sawhney. 1972. Studies on the somatic antigens of *Pasteurella multocida*. I. Protective role of passively acquired antibodies against somatic antigens. Indian Veterinary Journal 49(12):1169-1174.

Keywords: strain comparison, mice, antiserum, strain, passive immunity

Notes: Immunization experiments in mice using two strains of P.M. as challenge antigen showed variation in protection.

70. Baroutchieva, M. and D. Feinhaken. 1974. Serological classification of *Pasteurella* strains isolated from cases of fowl cholera. Refuah Veterinarith 31(2):55-58.

Keywords: serotyping, related bacteria, turkey, chicken, duck, goose, serotype 1, serotype 3, P.anatipestifer, strain comparison

Notes: A total of 131 *Pasteurella* isolates from cases of avian cholera were serotyped by the gel precipitation test. Eleven serotypes of P.M. as well as *P. anatipestifer* were identified.

71. Basu, B.C. 1930. On the role of *Argas persicus* Oku in the transmission of *Pasteurella avicida*. Indian Medical Gazette 65:326-327.

Keywords: P.avicida, tick, Argas persicus, reservoir, vector, chicken

Notes: The tick, *Argas persicus*, was able to transmit *P. avicida*.

72. Baxi, K.K., H. Blobel and J. Bruckler. 1970. The antigens of *Pasteurella multocida* serotypes B and E (German/E). Zentralblatt fur Bakteriologie, Parasitekunde und Infektionskrankheiten. 214(1):101-104.

Keywords: serotype B, serotype E, lipopolysaccharide, immunodiffusion, immunoelectrophoresis, strain comparison, serotype A

Notes: The lipopolysaccharide and the heat stable antigens of 3 strains of P.M. types B and E proved to be different in immunodiffusion and immunoelectrophoresis. The lipopolysaccharide of the three strains of type B were very similar, if not identical, with the lipopolysaccharide of the 3 strains of type E.

73. Beach, J.R. 1922. Observation on the occurrence of fowl cholera in California. Poultry Science 1(6):166-195.

Keywords: related bacteria, chicken, case report, duck, California, Bacterium avisepticum

Notes: Observations regarding the various ways in which infection with *Bacterium avisepticum* occurred and the methods of control adapted at that time are presented.

74. Beaudette, F.R. 1926. *B. aertrycke* as the etiological agent in a disease affecting squabs. Journal of the American Veterinary Medical Association 21(5):644-652.

Keywords: case report, related bacteria, Bacillus aertrycke

Notes: A report is given on an outbreak of a disease known as "megrims", involving *Bacillus aertrycke*.

75. Beckman, J.R. 1967. Wild birds and animals can be carriers of poultry disease. Poultry Tribune 73(1):33,84.

Keywords: treatment, wild bird, carrier, reservoir, transmission, prevention

Notes: Relationships between wild birds and animals and disease outbreaks in poultry flocks are presented.

76. Beeler, D. 1979. Turkey men learn more about CU oral vaccine for cholera. Animal Nutrition and Health 34(1):28.

Keywords: vaccine, immunization, immunity

Notes: A report is given on a half-day seminar on the Clemson University oral vaccine.

77. Bendheim, U. and A.E. Shoshan. 1979. Susceptibility to methyl bromide fumigation of *Pasteurella multocida*, *Pasteurella anatipestifer* and *Escherichia coli* in poultry litter. Refuah Veterinarith 35(4):154-158.

Keywords: treatment, methyl bromide, P.anatipestifer, disinfection, sanitation, turkey, chicken, survival

Notes: Under simulated field conditions use of methyl bromide at 150 g/m^2 for 96 hours yielded satisfactory bactericidal results against both Pasteurella species.

78. Bendheim, U. and A. Even-Shoshan. 1975. Survival of Pasteurella multocida and Pasteurella anatipestifer in various natural media. Refuah Veterinarith 32(2):40-46.

Keywords: P.anatipestifer, medium, survival, temperature, turkey, Israel

Notes: P.M. survived at ambient temperature for three days in distilled water, 28 days in deionized water, 12 days in tapwater, and 99 days in water contaminated with turkey litter.

79. Benson, M.L., R.G. Thomson and V.E.O. Valli. 1978. The bovine alveolar macrophage. II. In vitro studies with Pasteurella haemolytica. Canadian Journal of Comparative Medicine 42(3):368-369.

Keywords: cattle, macrophage, related bacteria, P.haemolytica, phagocytosis, immunity

Notes: Bovine alveolar macrophages were cultured in vitro and challenged with live and dead bacteria. The cells showed severe cytotoxic morphological changes and a low rate of phagocytosis after exposure to live P. haemolytica. Heat-killed bacteria of the same strain was readily phagocytosed and produced only slight cytotoxicity.

80. Berman, S.M. and D.C. Hirsh. 1978. Partial characterization of R-plasmids from Pasteurella multocida isolated from turkeys. Antimicrobial Agents and Chemotherapy 14(3):348-352.

Keywords: resistance, treatment, tetracycline, streptomycin, sulfonamide, turkey, plasmid, antibiotic resistance, Escherichia coli

Notes: An isolate of P.M. was resistant to tetracycline, streptomycin and sulfonamides. Plasmid DNA was separated and was used to induce resistance in E. coli. Properties of two distinct plasmids were defined.

81. Bernath, S. and T. Soos. 1968. Comparative efficiency test of fowl cholera vaccines in poultry and mice (Hungarian). Allatgyogyaszati Oltoanyagellenorzo Intezet Evkonyve 1968:61-74.

Keywords: vaccine, mice, chicken, immunization

Notes: (ONS)

82. Bessarabov, B.F., E.V. D'yazhkonova, L.D. Zhavoronkova, A.G. Rezvykh and V.F. Motylev. 1971. Prophylaxis of respiratory diseases of poultry (Russian). Veterinariya (Moscow) 5:54-57.

Keywords: antibiotic, aerosol, treatment, prevention, chicken

Notes: Treatments with antibiotics, sulphonamides, furuzolidone and their combinations delivered in aerosols, were found to be highly effective against respiratory diseases of poultry.

83. Bhasin, J.L. 1982. Serological types of Pasteurella multocida isolated from turkeys and chickens in Canada. Canadian Journal of Microbiology 28(9):1078-1080.

Keywords: serotyping, serotype 1, serotype 4, serotype 3, agar gel immunodiffusion, turkey, chicken, Canada

Notes: Serotyping based on the gel diffusion precipitin test gave 27 serotypes with one to six antigenic determinants.

84. Bhasin, J.L. and L. Lapointe-Shaw. 1980. Antigenic analysis of Pasteurella multocida (serotype 1) by crossed immunoelectrophoresis: characterization of whole cell associated antigens. Canadian Journal of Microbiology 26(12):1392-1402.

Keywords: serology, crossed immunoelectrophoresis, serotype 1, antigenic analysis, whole cell antigen

Notes: The immuno-chemical relationship between the antigenic components of reference antigen-antibody systems were established using tandem crossed immunoelectrophoresis and crossed-line immunoelectrophoresis.

85. Bhasin, J.L. and L. Lapointe-Shaw. 1980. Antigenic analysis of Pasteurella multocida (serotype 1) by crossed immunoelectrophoresis: characterization of cytoplasmic and cell envelope associated antigens. Canadian Journal of Microbiology 26(6):676-689.

Keywords: cytoplasmic antigen, cell envelope antigen, antigenic analysis, crossed immunoelectrophoresis, serotype 1

Notes: Crossed immunoelectrophoresis revealed antigenic complexity not previously found. Over 55 cytoplasmic and 19 cell envelope antigens were distinguished.

86. Bhasin, J.L. and E.L. Biberstein. 1968. Fowl cholera in turkeys - the efficacy of adjuvant bacterins. Avian Diseases 12(Supplement):159-168.

Keywords: vaccine, turkey, immunization, adjuvant

Notes: Four bacterins conferred significant immunity to avian cholera in turkeys

87. Bhave, S.A., I.M. Guy and J.A. Rycroft. 1977. Pasteurella multocida meningitis in an infant with recovery. British Medical Journal 2(6089):741-742.

Keywords: human, man, meningitis

Notes: (ONS)

88. Biberstein, E.L., M. Gills and H. Knight. 1960. Serological types of Pasteurella haemolytica. Cornell Veterinarian 50(3):283-300.

Keywords: related bacteria, P.haemolytica, hemagglutination, serotyping, catalase, lactose

Notes: Eleven serotypes of P. haemolytica were demonstrated using indirect hemagglutination. The type-specific substance was a freely diffusable surface material adsorbable on erythrocytes. The types correlated with ecological and physiological characteristics

89. Bierer, B.W. 1977. An evaluation of the effect of various concentrations of the Clemson University Pasteurella multocida drinking water vaccine on the immune response against fowl cholera disease in turkeys. Poultry Science 56(1):327-330.

Keywords: vaccine, immunization, dosage, turkey

Notes: An increase in the number of viable bacteria in the dose of an attenuated vaccine increased the protection of turkeys.

90. Bierer, B.W. and W.T. Derieux. 1976. The effect of sulfaquinoxaline feed medication on the immunologic response to a Pasteurella multocida vaccine administered to turkeys via drinking water. Poultry Science 55(1):209-212.

Keywords: treatment, sulfaquinoxaline, turkey, antibiotic, vaccine, immunization, immunosuppression, sulfonamide

Notes: Sulfaquinoxaline interfered with the establishment of immunity when given in feed at the time of vaccination.

91. Bierer, B.W. and W.T. Derieux. 1975. Immunologic response of turkey poults of various ages to an avirulent Pasteurella multocida vaccine in the drinking water. Poultry Science 54(3):784-787.

Keywords: vaccine, immunization, turkey, age

Notes: All the turkeys vaccinated at 20 and at 25 days of age survived the infection when challenged at 5 weeks of age. The response was less evident but, for the most part, still present, at 12 weeks of age. Evidence of infection appeared in groups vaccinated when 1, 5, 10 or 15-days-old and challenged at 5 weeks of age.

92. Bierer, B.W. and W.T. Derieux. 1975. The ability of blood plasma from drinking water vaccinated turkeys to protect against a lethal challenge of Pasteurella multocida. Poultry Science 54(6):2091-2093.

Keywords: vaccine, treatment, turkey, passive immunity, strain comparison

Notes: Plasma from turkeys vaccinated via the drinking water protected chicks against intramuscular challenge with a virulent strain of P.M.

93. Bierer, B.W. and W.T. Derieux. 1973. Exposing turkeys by various routes to an avirulent and virulent strains of Pasteurella multocida. Poultry Science 52(6):2290-2298.

Keywords: infection, vaccine, portal of entry, transmission, turkey, eye, feather

Notes: The eye was a possible route of infection under natural conditions. Scratches and puncture wounds to the skin and crushed feather follicles could serve as portals of infection.

94. Bierer, B.W. and W.T. Derieux. 1973. Efforts to transmit and to enhance the virulence of an avirulent strain of Pasteurella multocida in turkeys. Poultry Science 52(4):1510-1516.

Keywords: vaccine, turkey, transmission, immunity, virulence

Notes: Cohabitation of unvaccinated and vaccinated turkeys showed no evidence that the vaccine strain was readily transmissible between the groups.

95. Bierer, B.W. and W.T. Derieux. 1972. Immunologic response of turkeys to an avirulent Pasteurella multocida vaccine in the drinking water. Poultry Science 51(2):408-416.

Keywords: vaccine, immunization, turkey, adjuvant

Notes: Turkeys were vaccinated with a commercial oil-based vaccine, a live, avirulent strain or both. After challenge, infection developed in 12-45% of the birds given the commercial vaccine, in 5-10% of those given the avirulent vaccine, and in 2.5% of the birds given both vaccines.

96. Bierer, B.W. and W.T. Derieux. 1972. Immunologic response of turkeys to an avirulent *Pasteurella multocida* vaccine in the drinking water. 2. Duration of immunity. Poultry Science 51(4):1402-1408.

Keywords: immunity, turkey, vaccine, adjuvant

Notes: Results of challenge experiments showed that an avirulent vaccine used 4 weeks after the use of an oil-based bacterin was effective in reducing the total number of birds infected, but at 30 weeks after vaccination, the reduction of the total number infected was not as great.

97. Bierer, B.W. 1969. Blood serum fractions in turkeys exposed to fowl cholera infection. Poultry Science 48(4):1396-1400.

Keywords: immunity, turkey, serum protein, serology, electrophoresis

Notes: Electrophoretic examination of blood serum of fowl cholera exposed turkeys showed a decrease in albumin and an increase in alpha 2, alpha 3 and beta globulins.

98. Bierer, B.W. and W.F. Scott. 1969. Comparison of attenuated live *Pasteurella multocida* vaccine given in the drinking water every two weeks to an injected oil-base bacterin administered to turkeys. Poultry Science 48(2):520-523.

Keywords: immunization, turkey, vaccine

Notes: Administration of an attenuated live water vaccine given every two weeks was shown to be superior to oil-base bacterin injected once or twice.

99. Bierer, B.W. 1969. Comparison of a live drinking water vaccine for fowl cholera in turkeys to a killed drinking water vaccine and to five injected commercial bacterins. Poultry Science 48(2):633-636.

Keywords: vaccine, treatment, turkey, immunity

Notes: Under the conditions of this experiment, the live drinking water vaccine induced a significant degree of immunity compared to little or none induced by the killed drinking water vaccine.

100. Bierer, B.W. and T.H. Eleazer. 1968. Comparative efficacy of commercial fowl cholera bacterins and autogenous bacterin in White Leghorn hens artificially infected with *Pasteurella multocida*. Poultry Science 47(4):1162-1165.

Keywords: vaccine, chicken, egg production, secondary effect, treatment

Notes: Broth autogenous bacterin of various dose levels and commerical emulsified bacterin both increased egg production.

101. Bierer, B.W. and T.H. Eleazer. 1968. Continuous use of a live vaccine in the drinking water against fowl cholera infection in turkeys. Poultry Science 47:1258-1260.

Keywords: vaccine, P.avicida, treatment, turkey, immunity

Notes: Turkeys receiving drinking water exposure to an attenuated culture of *P. avicida* experienced fewer deaths than did unvaccinated turkeys.

102. Bierer, B.W. 1968. Gross lesions observed in turkeys infected with fowl cholera via the drinking water. Poultry Science 47(4):1365.

Keywords: detection, turkey, pathology, transmission

Notes: The time scale of the appearance of outstanding gross lesions of fowl cholera disease in turkeys was established.

103. Bierer, B.W. 1962. Treatment of avian pasteurellosis with injectable antibiotics. Journal of the American Veterinary Medical Association 141(11):1344-1346.

Keywords: oxytetracycline, antibiotic, vaccine, turkey, chicken, penicillin, streptomycin, treatment

Notes: Bacterin and antibiotics injected intramuscularly at the time of experimentally induced *Pasteurella* infection acted as therapeutic agents.

104. Bierer, B.W., C.L. Vickers and H.D. Valentine. 1961. Preparation and use of an autogenous fowl cholera bacterin for turkeys. Journal of the American Veterinary Medical Association 138(2):85-86.

Keywords: vaccine, turkey, immunization

Notes: A simple broth bacterin provided immunity in one of four experiment turkeys as soon as 2 days after inocculation with vaccine and the degree of immunity increased up to 50 per cent by the tenth day.

105. Bigland, C.H. 1954. A rabbit infestation with poultry mites and experimental mite transmission of fowl cholera. Canadian Journal of Comparative Medicine 18(6):213-214.

Keywords: mite, Dermanyssus gallinae, vector, rabbit, transmission, parasite

Notes: Homogenized mites (*Dermanyssus gallinae*), freshly removed from a rabbit which had died of P.M. infection, induced an acute *Pasteurella* infection when injected into two rabbits.

106. Bilic, V. and M. Zutic. 1981. Ampicillin sensitivity of bacteria isolated from the organs of poultry (Serbo-Croatian). Praxis Veterinaria 29(3/4):269-272.

Keywords: ampicillin, antibiotic, antibiotic sensitivity, chicken

Notes: (ONS)

107. Bilic, V. and M. Zutic. 1981. Sensitivity to antibiotics and chemotherapeutics of bacteria isolated from poultry. Praxis Veterinaria 29(1/2):91-96.

Keywords: antibiotic, sensitivity, chicken, chloramphenicol, tetracycline, treatment

Notes: In the period 1978-1980, 3,815 bacterial isolates from poultry were tested for drug sensitivity. One hundred percent of P.M. isolates were sensitive to chloramphenicol and tetracycline.

108. Bisgaard, M. 1982. Isolation and characterization of some previously unreported taxa from poultry with phenotypical characters related to *Actinobacillus* spp. and *Pasteurella* species. Acta Pathologica Microbiologica Immunologica Scandinavica, Section B: Microbiology 90(1):59-67.

Keywords: Actinobacillus, chicken, strain comparison, related bacteria, classification, biochemical test, colony morphology

Notes: Cultural, morphological and biochemical characteristics of taxa tentatively assigned to the genus *Actinobacillus* were compared to those of *Pasteurella* strains.

109. Bisgaard, M. 1982. Antigenic studies on *Pasteurella anatipestifer*, species incertae sedis, using slide and tube agglutination. Avian Pathology 11(3):341-350.

Keywords: agglutination, related bacteria, P.anatipestifer, serotyping, strain comparison

Notes: Comparative serological investigations including all available serotypes of *P. anatipestifer* showed that six American serotypes designated by arabic numbers were covered already by previously described serotypes.

110. Bisgaard, M. and A. Dam. 1981. Salpingitis in poultry. II. Prevalence, bacteriology, and possible pathogenesis in egg-laying chickens. Nordisk Veterinaermedicin 33(2):81-89.

Keywords: chicken, salpingitis, related bacteria, P.haemolytica, Enterobacteriaceae, Escherichia coli

Notes: Amoung 116,886 egg-laying chickens slaughtered, 438 (0.37 percent) were condemned because of salpingitis. One of the bacteria isolated was *P. haemolytica*.

111. Bisgaard, M. 1977. Incidence of *Pasteurella haemolytica* in the respiratory tract of apparently healthy chickens with infectious bronchitis. Characterization of 213 strains. Avian Pathology 6:285-292.

Keywords: carrier, chicken, infectious bronchitis, related bacteria, strain comparison, mycoplasma, Escherichia coli, stress

Notes: The tracheal flora of healthy chickens consisted mainly of gram-positive bacteria, but shifted to mainly gram-negative bacteria in chickens with infectious bronchitis. An increased incidence of *P. haemolytica* with an increase in age was noted. Most of the chickens in which *Escherichia coli* formed a predominant part of the tracheal flora also showed a positive serological reaction to *Mycoplasma gallisepticum*

112. Bivins, J.A. 1955. Pasteurellosis in feral birds. Cornell Veterinarian 45(2):180-181.

Keywords: case report, wild bird, robin, grackle, English sparrow, host range

Notes: Isolations of P.M. were made from a grackle and a robin.

113. Bivins, J.A. 1953. Pasteurellosis in a starling. Cornell Veterinarian 43:241-243.

Keywords: case report, wild bird, starling, crow, Corvus ossifragus, Sturnus vulgaris, host range

Notes: An infection in a free-flying starling was reported.

114. Blackburn, B.O., K.L. Heddleston and C.J. Pfow. 1975. *Pasteurella multocida* serotyping results (1971-1973). Avian Diseases 19(2):353-356.

Keywords: serotyping, duck, eagle, cat, goose, mink, swan, seal, sparrow, quail, strain comparison, chicken, turkey, bison, herring gull, pine siskin, swine, human, pheasant, man, host range, wild bird, serotype 3

Notes: A total of 762 isolates from 20 different animal species were serotyped. Serotype 3 was most common, accounting for 53 percent of the isolations.

115. Blanchard-Channell, M.T., M.K. Ashfaq and W.L. Kadel. 1987. Efficacy of a streptomycin-dependent, live *Pasteurella haemolytica* vaccine against challenge exposure to *Pasteurella haemolytica* in cattle. American Journal of Veterinary Research 48(4):637-642.

Keywords: cattle, related bacteria, P.haemolytica, vaccine, mutant, streptomycin dependance, immunization, herpesvirus, fibrinogen, antibody, stress, transport, signs

Notes: Calves were vaccinated once or twice with a streptomycin-dependent live *P. haemolytica* vaccine and subjected to transport stress and exposure to bovine herpesvirus. Twice vaccinated calves had greater weight gains and lower clinical sign scores than non-vaccinated controls, but the differences were not significant. Mean weight gains and clinical signs were significantly better in the once-vaccinated calves.

116. Blau, K.A., A.C.S. Ward, D.J. Prieur and L.B. Corbeil. 1987. Serum susceptibility of bovine *Pasteurellas*. Canadian Journal of Veterinary Research 51:157-161.

Keywords: serum sensitivity, virulence, strain comparison, lysozyme, iron, P.haemolytica, cattle, complement

Notes: Clinical isolates of P.M. and *P. haemolytica* were resistant to bovine serum whereas isolates from asymptomatic cattle varied in serum susceptibility. Lysozyme and iron saturation of serum did not affect the serum sensitivity of the isolates.

117. Blus, L.J., L.N. Locke and E. Cromartie. 1978. Avian cholera and organochlorine residues in an American Oystercatcher. Estuaries 1(2):128-129.

Keywords: Haematopus palliatus, organochlorine, case report, oystercatcher, DDE, wild bird, shorebird

Notes: The first record is made of avian cholera in the oystercatcher.

118. Bolotnikov, I.A. and O.V. Milovanov. 1973. Tissue respiration and oxidative phosphorylation in the liver and spleen of chicks after immunization against pasteurellosis (Russian). Sbornik Trudov Vsesoyuznyi Nauchno-issledovatel'skii Institut po Boleznyam Ptits 9:102-108.

Keywords: chicken, spleen, liver, physiology, pathogenesis, vaccine, immunization

Notes: (ONS)

119. Bolotnikov, I.A. 1973. Levels of nucleic acids and proteins in blood and liver of chicks vaccinated against pasteurellosis (Russian). Sbornik Rabot Uzbekskoi Nauchno-IssledovatelskiiVeterinarnyiInstitut (Tashkent) 21:99-103.

Keywords: nucleic acid, DNA, serum protein, liver, chicken, vaccine, immunization

Notes: (ONS)

120. Bolotnikov, I.A. and L.G. Shakhidzhanyan. 1973. Radiophosphorus labelling of some antigenic fractions of *Pasteurella multocida* (Russian). Doklady Vsesoyuznoi Akademii Sel'skokhozyaistvennykh Nauk imeni V.I. 6:38-39.

Keywords: radiolabel, strain comparison, antigen

Notes: A radio-labelling technique for antigenic analysis of P.M. is described.

121. Bond, R.E. and L.D. Olson. 1974. Susceptibility of turkey poults to *Pasteurella multocida* and a comparison with older turkeys. Avian Diseases 18(4):619-622.

Keywords: immunity, age, turkey, susceptibility

Notes: Three-week-old turkey poults were susceptible to three isolates of P.M. and the mortality increased with an increase in the number of organisms injected intramuscularly. One-year-old turkeys were more resistant to intramuscular injection of P.M. than either 9-week-old or 3-week-old turkeys.

122. Bond, R.E., E.L. McCune and L.D. Olson. 1972. Isolation of *Pasteurella multocida* from wild raccoons and foxes: preliminary report. Journal of Wildlife Diseases 8:296-299.

Keywords: Procyon lotor, Vulpes vulpes, transmission, reservoir, turkey, carrier, host range, fox, raccoon

Notes: P.M. was isolated from the tonsillar fossa of five of twelve wild raccoons and one of two red foxes collected near turkey farms.

123. Bond, R.E., J.M. Donahue and L.D. Olson. 1970. Colony features of Pasteurella multocida and their use in diagnosing fowl cholera in turkeys. Avian Diseases 14(1):24-28.

Keywords: strain comparison, stereomicroscopy, culture, identification, classification, colony morphology

Notes: Classification of isolates on the basis of size and color was 98% accurate for presumptive identification of P.M.

124. Bonovska, M., L. Karaivanov and V. Stoimenov. 1980. Thin layer chromatography studies on amino-acid metabolism in Pasteurella multocida (Bulgarian/E). Veterinarno-Meditsinski Nauki 17(1):47-51.

Keywords: strain comparison, chicken, amino acid, virulence, thin-layer chromatography, chromatography

Notes: Thin-layer chromatography showed a correlation between P.M. biotype and amino acid metabolism in the isolates studied

125. Borisenkova, A.N. 1978. Role of somatic and capsular antigens of Pasteurella multocida in the immunological specificity of vaccines (Russian). Veterinariya (Moscow) 5:40-42.

Keywords: vaccine, immunogenicity, formalin, USSR, somatic antigen, capsular antigen, duck, goose, turkey

Notes: Groups I - V of the somatic O antigen were identified in 324 strains of P.M. from fowls, ducks, geese, and turkeys in various areas of the USSR. A vaccine prepared by combining groups II, IV and V gave good protection in field use.

126. Borisenkova, A.N., T.I. Morozova, V.S. Gavrilova, I.M. Tereshin and L.S. Kravchenko. 1977. Biochemical, morphological and immunological features of cell membranes from Pasteurella multocida (Russian). Veterinariya (Moscow) 5:48-52.

Keywords: morphology, immunization, vaccine, cell membrane, culture

Notes: Cell membrane preparations immunogenic for chickens were morphologically uniform and were composed of protein, phospholipids and nucleic acids

127. Borisenkova, A.N., L.P. Sukhubaevskaya, E.A. Duyunov, V.V. Verevkin and L.G. Elkina. 1976. Epidemiology of pasteurellosis in turkeys and its control (Russian). Veterinariya (Moscow) 11:58-59.

Keywords: turkey, vaccine, antibiotic, sanitation, transmission

Notes: A short review is presented on the spread and control of avian cholera in turkeys.

128. Borisenkova, A.N. 1976. Role of cellular components of Pasteurella multocida in the formation of immunity to pasteurellosis in fowls (Russian/E). Veterinariya (Moscow) 2:45-46.

Keywords: vaccine, chicken, immunization, capsular antigen, aerosol, somatic antigen

Notes: Capsular and cytoplasmic membrane cell fractions conferred better immunity than other cell fractions, even when delivered by aerosol.

129. Borisenkova, A.N. 1975. Fundamentals of specific prophylaxis of fowl cholera. Profilaktika Boleznei Sel'skokheziaistvennykh Zhivotnykh v Promyshlennom Zhivotnovodstve 1975:264-268.

Keywords: treatment, chicken, vaccine

Notes: Recommendations are made for the prevention of avian cholera.

130. Borisenkova, A.N. and I.A. Bolotnikov. 1967. Antigenic properties of Pasteurella strains recovered from chickens and turkeys (Russian). Veterinariya (Moscow) 4:23-26.

Keywords: turkey, chicken, strain comparison, vaccine

Notes: The antigenic analysis of P.M. isolates from chickens and turkeys is presented.

131. Borkotaki, P., K.K. Baxi and S.N. Sharma. 1984. Respiratory carriers of Pasteurella multocida in apparently healthy and diseased animals and birds. Journal of Research, Punjab Agricultural University 21(2):323-325.

Keywords: wild bird, reservoir, carrier, transmission, host range

Notes: P.M. was not isolated from 61 birds of 16 species of wild birds caught in India.

132. Bottorff, C.A. 1948. How much, and when should we use sulfa drugs?. Turkey World May:11.

Keywords: treatment, antibiotic, turkey, sulfonamide, chicken

Notes: The efficiency and dosage of sulfa drugs for the treatment of turkey diseases is reported.

133. Bouley, G., A. Dubreuil, D. Pruliere and M. Bouley. 1974. Sex factors in airborne infection: comparative susceptibility of male and female non-immunized mice to aerosolized Pasteurella multocida. Laboratory Animals 8(1):9-12.

Keywords: sex factor, susceptibility, aerosol, mice, infectivity

Notes: Female mice were less susceptible to infection by aerosolized P.M. than were males of the same age (which were heavier). There was no significant difference in susceptibility of males and females of equal bodyweight, but different ages.

134. Bovkun, G.F. 1977. Immunochemical properties of Pasteurella antigens (Russian). Veterinariya (Moscow) 7:44-46.

Keywords: antigen, strain comparison, capsular antigen, vaccine

Notes: A short review is made of the suitability of certain P.M. antigens as immunogens.

135. Bovkun, G.F. 1976. Methods of typifying the cultures of Pasteurella multocida pathogen of hemorrhagic septicemia (Russian). Biulleten Vsesoyuznogo Instituta Eksperimental'noi Veterinarii 24:12-15.

Keywords: hemorrhagic septicemia, cattle, strain comparison, serotyping

Notes: Several methods for the antigenic classification of P.M. strains isolated from cattle are described.

136. Boyakhchyan, A.B. and M.S. Arevshatyan. 1966. The use of monomycin in treatment of experimentally induced pasteurellosis in chickens (Russian). Akad. Nauk. Arm. SSR. Izv. Biol. Nauk. 19(7):35-40.

Keywords: antibiotic, chicken, monomycin, treatment

Notes: An antibiotic treatment course for pasteurellosis is discussed.

137. Boyakhchyan, A.B. and M.S. Arevshatyan. 1966. Curative and prophylactic efficacy of monomycin in experimental pasteurellosis of hens (Russian). Antibiotiki 11(4):377-378.

Keywords: antibiotic, chicken, treatment, P.avium, monomycin

Notes: All experimental hens survived a P. avium infection when previously treated with monomycin.

138. Boyer, C.I.Jr. and J.A. Brown. 1963. Protection of turkeys vaccinated with fowl cholera bacterins. Avian Diseases 7(2):165-167.

Keywords: vaccine, serotype 1, serotype 3, turkey, immunization, serotyping

Notes: A bivalent bacterin prepared from P.M. serotypes 1 and 3 conferred more protection to turkeys challenged with virulent serotype 3 P.M. than a monovalent bacterin

139. Bozorgmehri, M.H. 1972. The so-called Pasteurella gallinarum from parrot (Farsi/E). Journal of Veterinary Faculty University of Tehran 28(3):85-89.

Keywords: case report, parrot, P.gallinarum, Iran, host range

Notes: A report is made on the isolation and identification of P.M. from a parrot.

140. Bozorgmehri, M.H. and M. Afnan. 1972. An outbreak of fowl cholera in a poultry farm (Farsi/E). Journal of Veterinary Faculty University of Tehran 28(3):23-28.

Keywords: case report, chicken, Iran, treatment

Notes: Acute avian cholera occurred among year-old hens on one poultry farm from the Tehran area. The outbreak was soon controlled by administration of penicillin in the drinking water.

141. Bozorgmehri-Fard, M.H. 1979. Resistance and sensitivity to different antibiotics in pathogenic bacteria of fowl origin (Farsi/E). Journal of Veterinary Faculty University of Tehran 35(1/2):88-102.

Keywords: antibiotic, antibiotic sensitivity, antibiotic resistance

Notes: (ONS)

142. Brada, W. and J.C.F. Campelo. 1960. Isolation of Pasteurella multocida from an owl (Otus choliba choliba Vieillot) (Portugese/E). Arquivos do Instituto de Biologia Animal 3:117-120.

Keywords: Strigidae, Otus choliba choliba, owl, case report, host range

Notes: The first isolation of P.M. from a Brazilian owl (Otus choliba choliba) is described.

143. Brand, C.J. 1984. Avian cholera in the Central and Mississippi flyways during 1979-1980. Journal of Wildlife Management 48(2):399-406.

Keywords: ecology, transmission, Chen caerulescens, waterfowl, snow goose, wild bird, host range

Notes: Up to 72,000 wterfowl died in avian cholera epizootics. Waterfowl may have served to distribute avian cholera along migration routes.

144. Brand, C.J. and R.M. Duncan. 1983. Avian cholera in an American flamingo, Phoenicopterus ruber: a new host record. California Fish and Game 69(3):190-191.

Keywords: flamingo, Salton Sea, serotype 1, Phoenicopterus ruber, shorebird, waterfowl, wading bird, wild bird, case report, host range

Notes: The first reported occurrence of avian cholera in a flamingo is described. P.M. was cultured from the liver and spleen.

145. Brandly, C.A., H.E. Moses, E.L. Jungherr, E.E. Jones and E.E. Tyzzer. 1946. Newcastle disease and fowl plague investigations in the war research program. Journal of the American Veterinary Medical Association 108(831):369-371.

Keywords: immunization, Newcastle disease, vaccine, detection

Notes: Diagnostic procedures and development of methods and vaccines for active immunization against avian cholera are described.

146. Briggs, D.J., C.E. Whitfill and J.K. Skeeles. 1985. Probability of survival based on ELISA titer following challenge of vaccinated chickens with the X-73 strain of Pasteurella multocida. Avian Diseases 29(4):904-911.

Keywords: ELISA, antibody, immunization, serology, enzyme-linked immunosorbent assay

Notes: The probability of survival of chickens after vaccination and challenge and antibody titers obtained with the enzyme-linked immunosorbent assay were found to be highly correlated.

147. Briggs, D.J. and J.K. Skeeles. 1984. An enzyme-linked immunosorbant assay for detecting antibodies to Pasteurella multocida in chickens. Avian Diseases 28(1):208-215.

Keywords: antibody, serology, chicken, serotyping, ELISA, enzyme-linked immunosorbent assay

Notes: The enzyme-linked immunosorbent assay described was highly sensitive and reproducible for use in detecting antibody responses to P.M. in chickens

148. Brion, A. 1962. A serious threat to aviculture: respiratory diseases (French). Annales de Medecine Veterinaire 106(1):3-17.

Keywords: France, review, Newcastle disease, infectious bronchitis, infectious coryza

Notes: A review of the threat of respiratory diseases to French aviculture is presented.

149. Brisou, B., J. Abgrall, J.P. Leterrier, M. Verdier, J.P. Lepers, J.P. Georget and A. Georges. 1981. Septicemias and bacteremias due to Pasteurella multocida. General review of a new case following a cat bite (French). Medecine et Maladies Infectienses 11:210-216.

Keywords: cat, bite, man, septicemia, bacteremia, case report

Notes: (ONS)

150. Brogden, K.A., R.B. Rimler, R.C. Cutlip and H.D. Lehmkuhl. 1986. Incubation of Pasteurella haemolytica and Pasteurella multocida lipopolysaccharide with sheep lung surfactant. American Journal of Veterinary Research 47(4):727-729.

Keywords: lipopolysaccharide, related bacteria, sheep, lung, P.haemolytica

Notes: Lipopolysaccharides were extracted from P. haemolytica and P.M. isolated from sheep with respiratory infections. Following incubation with sheep lung surfactant, binding occurred between the lipopolysaccharides and surfactant vesicles, resulting in stable complexes.

151. Brogden, K.A. and K.R. Rhoades. 1983. Prevalence of serologic types of Pasteurella multocida from 57 species of birds and mammals in the United States. Journal of Wildlife Diseases 19(4):315-320.

Keywords: serotyping, agar gel immunodiffusion, serotype 1, serotype 3, wild bird, wild mammal, strain comparison, host range

Notes: The serologic types of 265 isolates of P.M. from 50 bird and 7 animal species were determined using the gel diffusion precipitin test. Serotypes 1 and 3 were most prevalent.

152. Brogden, K.A. and R.B. Rimler. 1983. Lysates of turkey-grown *Pasteurella multocida*: effects of solubilizing agents on the immunologic properties of membrane vesicles. American Journal of Veterinary Research 44(3):428-432.

Keywords: cross protection, protein, vaccine, morphology, cell membrane, antigen

Notes: Determination of the physical and chemical differences between laboratory and turkey-grown P.M. was presented. Abilities of solubilizing agents to release a cross-protective factor from membrane vesicles were examined.

153. Brogden, K.A. and R.B. Rimler. 1982. Lysates of turkey-grown *Pasteurella multocida*: partial solubilization of the cross-protection factor(s). American Journal of Veterinary Research 43(10):1781-1785.

Keywords: immunization, proteolytic enzyme, immunity, fractionation, density gradient centrifugation, enzyme, antigen, cross protection

Notes: A cross-protective factor was found to be present in each fraction of an ultracentrifuged lysate of P.M. Pepsin destroyed a cross-protection factor while trypsin-treated fractions retained 50 percent protection. Heating at 56C for one hour did not have an effect on the factor's cross-protecting ability

154. Brogden, K.A., K.R. Rhoades and R.B. Rimler. 1982. Serologic types and physiologic characteristics of 46 avian *Pasteurella anatipestifer* cultures. Avian Diseases 26(4):891-896.

Keywords: related bacteria, P.anatipestifer, serotyping, strain comparison, serotype 1, serotype 2, biochemical test, agar gel immunodiffusion

Notes: Antigens from 39 field isolates of *P. anatipestifer* reacted with antisera prepared against seven reference strains representing serotypes 1,2,4,6, and 7. Antigens from five isolates did not react. Serotype 1 and serotype 2 were the most common.

155. Brogden, K.A. and R.B. Rimler. 1982. Lysates of turkey-grown *Pasteurella multocida*: examination of vaccine preparations by electron microscopy. American Journal of Veterinary Research 43(2):304-309.

Keywords: ultrastructure, electron microscopy, differential centrifugation, density gradient centrifugation, lyophilization, chemical lysis, turkey, morphology

Notes: The effects of differential centrifugation, density gradent centrifugation, freeze-thawing, and chemical lysis on the morphology of P.M. were studied by electron microscopy.

156. Brogden, K.A. 1980. Physiological and serological characteristics of 48 *Pasteurella multocida* cultures from rabbits. Journal of Clinical Microbiology 11(6):646-649.

Keywords: biochemical test, serotyping, strain comparison, serotype 3, rabbit, agar gel immunodiffusion

Notes: Most of forty-eight cultures from rabbits showed typical physiological characteristics of P.M. Overall, the most prevalent gel diffusion precipitin reactions involved serotype 3 (25 percent) and serotype 12 (66.7 percent).

157. Brogden, K.A. and R.A. Packer. 1979. Comparison of *Pasteurella multocida* serotyping systems. American Journal of Veterinary Research 40(9):1332-1335.

Keywords: serotyping, classification, strain comparison, hemagglutination, agar gel immunodiffusion, capsular antigen, somatic antigen, agglutination

Notes: A reliable correlation between serotypes determined by different typing systems could not be made because of the antigenic complexity of P.M. and the nature of the antigen reacting in the plate agglutination, indirect hemagglutination, tube agglutination and the agar gel immunodiffusion tests.

158. Brogden, K.A., K.R. Rhoades and K.L. Heddleston. 1978. A new serotype of *Pasteurella multocida* associated with fowl cholera. Avian Diseases 22(1):185-190.

Keywords: serology, turkey, serotyping, serotype 16, agar gel immunodiffusion, strain comparison

Notes: Gel-diffusion precipitin tests demonstrated an additional P.M. serotype, designated serotype 16.

159. Brogden, K.A. and P.A. Rebers. 1978. Serologic examination of the Westphal-type lipopolysaccharides of *Pasteurella multocida*. American Journal of Veterinary Research 39(10):1680-1682.

Keywords: serology, agar gel immunodiffusion, strain comparison, lipopolysaccharide, antigen

Notes: Lipopolysaccharides appeared to be a major component of the heat stable antigens responsible for type specificity, although the differences between the various antigens were minor.

160. Brown, J., D.L. Dawe and R.B. Davis. 1971. Bobwhites (*Colinus virginianus*) failure as vectors of fowl cholera in turkeys. Journal of Wildlife Diseases 7(1):63-66.

Keywords: vector, bobwhite quail, Colinus virginianus, transmission, turkey, host range, carrier

Notes: Bobwhite quail exposed to avian cholera were allowed to cohabit with susceptible turkeys. None of the turkeys developed avian cholera, which suggested that the bobwhite quail is not a vector of the disease.

161. Brown, J., D.L. Dawe, R.B. Davis, J.W. Foster and K.K. Srivastava. 1970. Fowl cholera immunization in turkeys. I. Efficacy of various cell fractions of *Pasteurella multocida* as vaccines. Applied Microbiology 19(5):837-841.

Keywords: turkey, immunization, vaccine, cell wall, adjuvant

Notes: A combination vaccine composed of culture filtrate, cell wall and cytoplasm gave more protection than a commercial vaccine

162. Brown, J., R.B. Davis and D.L. Dawe. 1969. Pigeon failure as vector of fowl cholera in turkeys. Avian Diseases 13(3):670-672.

Keywords: pigeon, vector, carrier, Columba sp., turkey, transmission, host range

Notes: Pigeons exposed to avian cholera were allowed to cohabit with susceptible turkeys, but no turkeys developed avian cholera, suggesting that the common pigeon is not a vector of the disease

163. Brugere-Picoux, J. 1984. Avian pasteurellosis (fowl cholera) (French/E). Recueil de Medecine Veterinaire 160(11):989-993.

Keywords: review, chicken, virulence

Notes: The variability of pathogenicity of P.M. strains and of bird resistance allowed classification of the state of disease as subacute, acute and chronic. Treatment of infected birds with antibiotics and sulfonamides was followed by reinfection. Vaccination and sanitation were recommended as prophylactic measures.

164. Bruner, D.W., C.I. Angstrom and J.I. Price. 1970. *Pasteurella anatipestifer* infection in pheasants. A case report. Cornell Veterinarian 60(3):491-494.

Keywords: case report, pheasant, P.anatipestifer, ringneck pheasant, Japanese green pheasant, related bacteria

Notes: A strain of *P. anatipestifer* was isolated from Korean Ringneck and Japanese Green pheasants.

165. Bukowski, K. 1966. Phosphatase activity in *Pasteurella multocida*. A test for differentiation between var. *mammalium* and var. *avium* of this organism (Polish). Acta Microbiolgica Polonica 15(1):13-16.

Keywords: strain comparison, cattle, swine, biochemical test, phosphatase, chicken

Notes: Phosphatase activity tests were used as a simple method for differentiation between variants of P.M.

166. Burr, E.W. 1981. Intranasal caseous fibrinous plug causing upper respiratory distress in 2 African gray parrots (*Psittacus erithacus*). Avian Diseases 25(2):542-544.

Keywords: parrot, African gray parrot, respiratory disease, pathology, Psittacus erithacus

Notes: (ONS)

167. Butkin, E.I. 1981. Effectiveness of an emulsified *Pasteurella multocida* vaccine for eradicating pasteurellosis from poultry flocks (Russian). Nauchnye Trudy-Voronezhskii Sel'skokhozyaistvennyi Institut imeni K.D. Glinki 114:8-11.

Keywords: vaccine, immunization, adjuvant, chicken

Notes: (ONS)

168. Bychkov, A.I. 1966. Epizootiology and measures for eradicating fowl pasteurellosis (Russian). Veterinariya (Moscow) 2:43-45.

Keywords: transmission, chicken, control, sanitation

Notes: A short review is given of the transmission and control of pasteurellosis.

169. Bzhehinsky, S.K. 1964. Effect of terramycin and biomycin on post-vaccinal fowl cholera, and on the immunity of chicks (Russian). Ptitsevodstvo 12:27-28.

Keywords: chicken, immunosuppression, antibiotic, immunization

Notes: The effect of antibiotic treatment on the efficacy of vaccination is discussed.

170. Cadeddu, A. 1985. Pasteur and fowl cholera: critical review of a historical account (Italian). Pubbl. Stn. Zool. Napoli II 7(1):87-104.

Keywords: Pasteur, review

Notes: (ONS)

171. Cai, B.X., Z.J. Wu, L.Q. Wu, Y.M. Dou and S.C. Huang. 1983. Preliminary trial of vaccination against fowl cholera with attenuated strain 807 of Pasteurella multocida (Chinese). Animal Husbandry and Veterinary Medicine 15(2):6-9.

Keywords: vaccine, chicken, duck, goose, egg production, treatment

Notes: (ONS)

172. Cameron, C.M. and F.J. Bester. 1983. The inefficacy of polyvalent Pasteurella multocida vaccines for sheep. Onderstepoort Journal of Veterinary Research 50(2):101-104.

Keywords: vaccine, strain, antigen isolation, sheep, adjuvant, antigen

Notes: Immunity assays on sheep sera showed that vaccines containing more than four strains of P.M. did not give good immunity. The immune response was not enhanced by the use of an oil adjuvant.

173. Cameron, C.M., L. Pienaar and A.S.M. Vermeulen. 1980. Lack of cross immunity among Pasteurella multocida type A strains. Onderstepoort Journal of Veterinary Research 47(4):213-219.

Keywords: serology, antigenic analysis, vaccine, serotype A, mice, sheep

Notes: The immunological relationship of type A strains can not be predicted on the basis of their serological characteristics.

174. Cameron, C.M., M.M. Engelbrecht and A.S.M. Vermeulen. 1978. The serological and immunological relationship of type strains A and D of Pasteurella multocida to field isolates from sheep. Onderstepoort Journal of Veterinary Research 45:215-220.

Keywords: serology, immunology, strain comparison, vaccine, serotype A, serotype B, sheep

Notes: Serologically related strains of P.M. did not necessarily give rise to cross immunity, but serologically unrelated strains may have exhibited an appreciable degree of cross protection.

175. Cameron, W.J. 1969. New solutions to old problems. Turkey World January:18-19.

Keywords: general, turkey, Minnesota

Notes: A very short assessment of problem diseases in Minnesota turkey farms in 1969 includes avian cholera

176. Campbell, G. 1972. Pasteurellosis in turkeys. Veterinary Services Bulletin, Department of Agriculture and Fisheries (Dublin) 1(3):96-98.

Keywords: review, general, turkey

Notes: (ONS)

177. Campbell, G. 1972. Pasteurellosis in turkeys. Irish Veterinary Journal 26(12):253-254.

Keywords: turkey, review, Ireland, sanitation, transmission, vaccine

Notes: Pasteurellosis and its control in turkeys are briefly reviewed.

178. Canham, A.S. and D.A. Haig. 1942. Wattle disease: a form of chronic fowl cholera in Natal. Journal of the South African Veterinary Medical Association 13(1):25-27.

Keywords: wattle disease, chicken, P.aviseptica, case report, treatment, sex

Notes: Wattle disease was more common in cocks than in hens and an investigation suggested that the cases were actually endemic fowl cholera.

179. Canto, J., E.L. Biberstein, T.A. Schulte and D. Behymer. 1983. Cross reactivity of Haemophilus somnus antibody in agglutination and complement fixation tests and in the enzyme-linked immunosorbent assay. Journal of Clinical Microbiology 17(3):500-506.

Keywords: cross reaction, Haemophilus somnus, agglutination, complement fixation, ELISA, enzyme-linked immunosorbent assay

Notes: Haemophilus somnus rabbit immune sera was found to agglutinate P.M.. In complement fixation tests no reaction occurred, and in the enzyme-linked immunosorbent assay, cross-reactions were seen with Pasteurella spp..

180. Cardella, M.A., M.A. Adviento and R.M. Nervig. 1987. Vaccination studies against experimental bovine Pasteurella pneumonia. Canadian Journal of Veterinary Research 51(2):204-211.

Keywords: vaccine, cattle, pneumonia, immunization, P.haemolytica, related bacteria

Notes: Both clinical and pathological responses to challenge exposure in calves vaccinated with live Pasteurella vaccines were less severe than those of control calves. Vaccine effectiveness appeared to be dose dependent.

181. Carlson, H.C. and K.S. Pennifold. 1961. Pasteurellosis in penguins. Canadian Veterinary Journal 2(4):157-158.

Keywords: case report, penguin, Spheniscus humboldti, Canada, Florida, Alberta, host range

Notes: Necropsies on four dead penguins (Spheniscus humboldti) shipped from Florida to an Alberta zoo revealed lesions suggestive of avian cholera. P.M. was isolated from the lesions.

182. Carpenter, T.E., K.P. Snipes, D. Wallis and R. McCapes. 1988. Epidemiology and financial impact of fowl cholera in turkeys: A retrospective analysis. Avian Diseases 32(1):16-23.

Keywords: turkey, cost/benefit

Notes: In avian cholera affected flocks, compared to control flocks, the mortality was 52 percent (toms) and 26 percent (hens) higher, medication costs were tripled, and the condemnation rate was 60 percent higher. The average costs of avian cholera were nearly $0.40 per bird ($18,750 per flock).

183. Carrada-Bravo, T., G.O. Pacheco and A. Cuadra. 1971. Bacteriological study of avian pasteurellosis (Spanish/E). Revista Latinoamericana de Microbiologia 13(3):183-187.

Keywords: serotyping, case report, morphology, guinea pig, chicken, rabbit, pathogenicity, virulence

Notes: Five strains of P.M. were isolated, with all of the strains being fully virulent to fowls, guinea pigs and rabbits.

184. Carter, G.R. and M.M. Chengappa. 1981. Identification of types B and E Pasteurella multocida by counterimmunoelectrophoresis. Veterinary Record 108(7):145-146.

Keywords: counterimmunoelectrophoresis, hemorrhagic septicemia, cattle, buffalo, strain comparison, serotype B, serotype C

Notes: Counterimmunoelectrophoresis accurately identified serotypes B and E without cross reaction. Its use was recommended for laboratory diagnosis of hemorrhagic septicemia.

185. Carter, G.R. and M.M Chengappa. 1980. Hyaluronidase production by type B Pasteurella multocida from cases of hemorrhagic septicemia. Journal of Clinical Microbiology 11(1):94-96.

Keywords: hyaluronidase, capsular antigen, strain comparison, serotype B, hemorrhagic septicemia, cattle, goat, human, swine, man

Notes: Seventy-four cultures representing all four capsular types were examined for the production of hyaluronidase by the depolymerization of streptococcal capsular hyaluronic acid and by degradation of sodium hyaluronidase in a solid culture medium. Serotype B produced hyaluronidase, but serotypes A, D and E did not

186. Carter, G.R. 1976. Pasteurella infections as sequelae to repiratory viral infections. Journal of the American Veterinary Medical Association 163(7):863-864.

Keywords: related bacteria, P.haemolytica, shipping fever, cattle, strain comparison

Notes: Pasteurella infections are frequent sequela to viral respiratory diseases in cattle.

187. Carter, G.R. and S.W. Rundell. 1975. Identification of type A strains of Pasteurella multocida using staphylococcal hyaluronidase. Veterinary Record 96:343.

Keywords: strain comparison, swine, cattle, chicken, turkey, bison, identification, serotype A, serotype D, acriflavin, hyaluronidase, colony morphology

Notes: Serotype A was the only P.M. strain tested that showed a dramatic increase in colony size when grown adjacent to a hyaluronidase-producing Staphylococcus aureus colony.

188. Carter, G.R. and P. Subronto. 1973. Identification of type D strains of Pasteurella multocida with acriflavine. American Journal of Veterinary Research 34(2):293-294.

Keywords: serotyping, acriflavin, hemagglutination, serotype D

Notes: Serotype D was the only P.M. strain which formed a characteristic heavy, flocculent precipitate when acriflavin was added to a broth culture.

189. Carter, G.R. 1972. Simplified identification of somatic varieties of Pasteurella multocida causing fowl cholera. Avian Diseases 16(5):1109-1114.

Keywords: pathogenicity, serotyping, strain comparison, capsular antigen, somatic antigen, hemagglutination, agglutination

Notes: Representative type strains as well as field strains of P.M. from avian cholera cases were examined by the indirect hemagglutination procedure and by a rapid plate agglutination test. The former method identified the specific capsular or K substance, and the latter identified the somatic antigens.

190. Carter, G.R. 1972. Agglutinability of Pasteurella multocida after treatment with hyaluronidase. Veterinary Record 91(6):150-151.

Keywords: hyaluronidase, agglutination, serotyping, capsular antigen

Notes: A procedure is described for removing capsular hyaluronic acid in order for agglutination tests to be effectively employed.

191. Carter, G.R., V.J. Theodorides and J.F. Freeman. 1972. Blood concentration study of sulfamethazine in calves infected with Pasteurella multocida. Veterinary Medicine and Small Animal Clinician 67(7):739-742.

Keywords: blood, serum, sulfonamide, antibiotic, cattle, hemorrhagic septicemia, sulfamethazine

Notes: A concentration of 2 mg of sulfamethazine per 100 ml of plasma was sufficient to control P.M. infection in calves.

192. Carter, G.R. 1972. Improved hemagglutination test for identifying type A strains of Pasteurella multocida. Applied Microbiology 24(1):162-163.

Keywords: antigen, detection, strain comparison, hyaluronidase, lipopolysaccharide, capsular antigen

Notes: An indirect hemagglutination test involving the treatment of mucoid cultures with testicular hyaluronidase is described for the recognition of type A strains of P.M.

193. Carter, G.R. 1967. Pasteurellosis: Pasteurella multocida and Pasteurella haemolytica. Advances in Veterinary Science 11:321-379.

Keywords: serology, biochemistry, review, P.haemolytica, related bacteria

Notes: An in-depth discussion of nomenclature, distribution, characteristics, varieties, disease, and immunity of Pasteurella species is presented.

194. Carter, G.R. and D.E. Rappay. 1963. A haemagglutination test employing specific lipopolysaccharide for the detection and measurement of Pasteurella antibodies to Pasteurella multocida. British Veterinary Journal 119(2):73-77.

Keywords: antibody, serology, hemagglutination, lipopolysaccharide, detection

Notes: The indirect hemagglutination test was more specific than other serological procedures used to detect antibody against P.M.

195. Carter, G.R. 1963. Proposed modification of the serological classification of Pasteurella multocida. Veterinary Record 75(47):1264.

Keywords: classification, strain comparison, capsular antigen, serotype A, serotype B, serotype D, serotype E

Notes: A proposal for the capsular classification of P.M. into four groups: A, B, D and E.

196. Carter, G.R. and D.E. Rappay. 1962. Formalinized erythrocytes in the haemagglutination test for typing Pasteurella multocida. British Veterinary Journal 118(7):289-292.

Keywords: erythrocyte, serotyping, hemagglutination, strain comparison

Notes: Formalinized erythrocytes were used successfully in the indirect hemagglutination test for the serotyping of P.M. isolates.

197. Carter, G.R. and C. Grinewitsch. 1962. The recovery of Pasteurella multocida from lyophilised cultures. Veterinary Record 74(31):861.

Keywords: medium, lyophilization, recovery, anaerobic growth, blood

Notes: The growth of P.M. on solid medium from small inocula was shown to increase in the presence of blood or under anaerobic conditions.

198. Carter, G.R. 1962. Further observations on typing Pasteurella multocida by the indirect hemagglutination test. Canadian Journal of Comparative Medicine and Veterinary Science 26:238-240.

Keywords: strain comparison, acriflavin, hemagglutination

Notes: Refined methods of the indirect hemagglutination test are discussed.

199. Carter, G.R. 1961. A new serological type of Pasteurella multocida from central Africa. Veterinary Record 73(42):1052.

Keywords: serotype E, Africa, strain comparison, hemorrhagic septicemia, cattle, serotyping

Notes: A new type of P.M. (type E) was found, which warranted separate type distinction.

200. Carter, G.R. and R.V.S. Bain. 1960. Pasteurellosis (Pasteurella multocida). A review stressing recent developments. Veterinary Reviews and Annotations 6(2):105-128.

Keywords: immunization, infection, strain comparison, review, serotyping

Notes: New knowledge of the serological types of P.M. and the discovery of P.M. as a secondary infection to a viral disease are discussed.

201. Carter, G.R. 1959. Studies on Pasteurella multocida. IV. Serological types from species other than cattle and swine. American Journal of Veterinary Research 20(74):173-175.

Keywords: strain comparison, hemagglutination, colony morphology, capsule, smooth, rough, dog, cat, chicken, man, sheep, monkey, mink, mouse, rabbit, host range

Notes: Strains of P.M. from various species, diseases, and geographic locations were examined serologically by the indirect hemagglutination test.

202. Carter, G.R. 1958. Some characteristics of type A strains of Pasteurella multocida. British Veterinary Journal 114:356-357.

Keywords: strain comparison, capsular antigen, serotype A, hyaluronic acid

Notes: Due to the presence of hyaluronic acid in their capsule, type A strains can be distinguished from types B, C, and D.

203. Carter, G.R. 1958. Failure of the agglutination test to identify types of Pasteurella multocida. Nature 181(4616):1138.

Keywords: strain comparison, serotyping, agglutination, capsule

Notes: The agglutination test was found to be unreliable because of inagglutinability due to capsulation and spontaneous clumping in the presence of sodium chloride.

204. Carter, G.R. 1957. Studies on Pasteurella multocida. II. Identification of antigenic characteristics and colonial variants. American Journal of Veterinary Research 18(66):210-213.

Keywords: variant, serotyping, smooth, rough, mucoid, colony morphology, acriflavin, capsule

Notes: A description is given of the acriflavine test and the use of obliquely transmitted light for the identification of non-encapsulated colonial variants of P.M.

205. Carter, G.R. 1956. A serological study of Pasteurella haemolytica. Canadian Journal of Microbiology 2:483-488.

Keywords: related bacteria, hemagglutination, serotyping, capsular antigen, P.haemolytica, shipping fever, cattle, erythrocyte

Notes: Hemagglutination tests in which P. haemolytica capsular polysaccharides were absorbed to human red cells and treated with specific sera showed 51 strains of P. haemolytica isolated from cases of shipping fever to be serologically homogeneous.

206. Carter, G.R. 1955. Studies on Pasteurella multocida. I. A hemagglutination test for the identification of serological types. American Journal of Veterinary Research 16(60):481-484.

Keywords: strain comparison, serotype A, serotype B, serotype C, hemagglutination, serotyping, serotype D

Notes: A hemagglutination test is described for the identification of four serological types (A, B, C, D) of P.M.

207. Carter, G.R. and E. Annau. 1953. Isolation of capsular polysaccharides from colonial variants of Pasteurella multocida. American Journal of Veterinary Research 14:475-478.

Keywords: lipopolysaccharide, capsular antigen, strain comparison, colony morphology

Notes: The method of isolation and several of the chemical and biological properties of the soluble capsular substances of P.M. are described.

208. Carter, G.R. and J.L. Byrne. 1953. A serological study of hemorrhagic septicemia Pasteurella. Cornell Veterinarian 43:223-230.

Keywords: capsular antigen, strain comparison, Canada, hemorrhagic septicemia, serotyping, cattle

Notes: The predominant serological types of P.M. found in domestic animals in Canada were determined.

209. Carter, G.R. and C.H. Bigland. 1953. Dissociation and virulence in strains of Pasteurella multocida isolated from a variety of lesions. Canadian Journal of Comparative Medicine 17(11):473-479.

Keywords: virulence, immunogenicity, pathogenesis, strain comparison, mice

Notes: Strains of P.M. isolated from a variety of lesions were examined in regard to dissociation status, mouse virulence and serological type and a correlation between the dissociants and the degree of mouse virulence was observed.

210. Carter, G.R. 1952. The type specific capsular antigen of Pasteurella multocida. Canadian Journal of Medical Science 30:48-53.

Keywords: capsular swelling, precipitation test, capsular antigen, serotyping, serotype A, serotype B, serotype C, strain comparison

Notes: Three distinct serological types of P.M. were identified by means of precipitation tests and a capsular swelling test, demonstrating a type specific capsular antigen, possibly polysaccharide in nature.

211. Carter, G.R. 1952. Some comments on pasteurellosis. Canadian Journal of Comparative Medicine 16(3):150-152.

Keywords: virulence, colony morphology, fluorescence, pathogenesis, cattle, hemorrhagic septicemia

Notes: A discussion is presented on whether P.M. is the primary cause of hemorrhagic septicaemia or a secondary invader is presented, which emphasizes colonial flourescence as a virulence marker.

212. Carter, G.R. 1951. Studies on a Pasteurella multocida chicken embryo vaccine. II. Type-specific nature of immunity elicited by a monovalent Pasteurella multocida vaccine. American Journal of Veterinary Research 12(45):326-328.

Keywords: immunity, vaccine, strain, chick embryo, mice, cross protection, serotype A, serotype B, serotype C

Notes: Mice immunized with chicken embryo vaccines prepared from types A, B and C of P.M. showed a strong resistance to homologous challenges, but gave only a low degree of immunity to heterologous challenges.

213. Carter, G.R. 1950. Studies on a Pasteurella multocida chicken embryo vaccine. I. The comparative immunizing value of broth bacterins and a chicken embryo vaccine in mice. American Journal of Veterinary Research 11(40):252-255.

Keywords: vaccine, chicken, mice, chick embryo, immunogenicity

Notes: A chick embryo vaccine was immunologically superior to broth bacterins.

214. Cary, C.J., G.K. Peter, C.E. Chrisp and D.F. Keren. 1984. Serological analysis of five serotypes of Pasteurella multocida of rabbit origin by use of an enzyme-linked immunosorbent assay with lipopolysaccharide antigen. Journal of Clinical Microbiology 20(2):191-194.

Keywords: detection, antibody, antigen, ELISA, rabbit, lipopolysaccharide, strain comparison, enzyme-linked immunosorbent assay

Notes: The feasibility of detecting antibodies to each of several lipopolysaccharide antigens combined in the same assay well was demonstrated.

215. Cash, J.R. and C.A. Doan. 1930. Spontaneous and experimental infection of pigeons with B. aertrycke. Proceedings of the Society for Experimental Biology and Medicine 28:235-238.

Keywords: Bacillus aertrycke, myeloid leukemia, pigeon, diet, anemia

Notes: Pigeons being used in a study on the effect of diet on blood formation died from a bacterial infection. A gram-negative bacterium, Bacillus aertrycke, was isolated which caused the same disease in inocculated pigeons.

216. Catt, D.M., M.M. Chengappa, W.L. Kadel and C.E. Herren. 1985. Preliminary studies with a live streptomycin-dependent Pasteurella multocida and Pasteurella haemolytica vaccine for the prevention of bovine pneumonic

pasteurellosis. Canadian Journal of Comparative Medicine 49(4):366-371.

Keywords: vaccine, mutant, streptomycin dependance, cattle, combined vaccine, P.haemolytica, antibiotic, streptomycin, related bacteria

Notes: The streptomycin-dependent vaccine offered better protection than the commercial bacterin against a virulent homologous challenge.

217. Chaffee, V.W., E.A.Jr. James and R.J. Montali. 1975. Suppurative mandibular osteomyelitis associated with Pasteurella multocida in a rabbit. Veterinary Medicine and Small Animal Clinician 70(12):1411-1413.

Keywords: rabbit, osteomyelitis, pathology

Notes: (ONS)

218. Chandrasekaran, S., K.R. Rhoades and A. Sotoodehnia. 1985. P. multocida type B:2 isolated from poultry in Iran. Veterinary Record 117(7):155.

Keywords: case report, serotyping, antigen, serotype B:2, Iran, chicken

Notes: The isolation of P.M. type B:2 from fowl in Iran is described.

219. Chandrasekaran, S. and P.C. Yeap. 1982. Pasteurella multocida in pigs: the serotypes and the assessment of their virulence in mice. British Veterinary Journal 138:332-336.

Keywords: mice, serotyping, swine, virulence, Malaysia, serotype A, serotype B, serotype D, colony morphology

Notes: The virulence in mice of 20 isolates of P.M. made from pigs in Malaysia was studied. The serotype B strains were highly virulent. There was no correlation between the pathogenicity for mice and the colony morphology or the organ of isolation

220. Chandrasekaran, S., P.C. Yeap and B.H. Chuink. 1981. Biochemical and serological studies of Pasteurella multocida isolated from cattle and buffaloes in Malaysia. British Veterinary Journal 137(4):361-367.

Keywords: case report, serology, Malaysia, cattle, buffalo, strain comparison, hemorrhagic septicemia

Notes: A biochemical and serological study on 155 isolates of P.M. from different outbreaks of hemorrhagic septicemia in Malaysia is described.

221. Chang, C.F. 1984. Pathogenesis of Pasteurella anatipestifer infection in ducks and drug sensitivity (Chinese/E). Taiwan Journal of Veterinary Medicine and Animal Husbandry 43:40-46.

Keywords: duck, antibiotic sensitivity, antibiotic, P.anatipestifer, related bacteria

Notes: (ONS)

222. Chang, C.F. 1984. Immunological response of ducks to an avirulent Pasteurella multocida vaccine in the drinking water (Chinese/E). Taiwan Journal of Veterinary Medicine and Animal Husbandry 43:33-39.

Keywords: vaccine, duck, immunization, immunity

Notes: An avirulent vaccine given twice provided considerable protection against avian cholera, and provided better protection than did a killed vaccine

223. Chang, C.F., P.Y. Yu and C.L. Wang. 1983. Use of lincomycin and spectinomycin against duck cholera (Chinese/E). Taiwan Journal of Veterinary Medicine and Animal Husbandry 42:59-65.

Keywords: treatment, lincomycin, antibiotic, spectinomycin, duck

Notes: Lincomycin and a combination of lincomycin and spectinomycin in various amounts was effective against P.M. infection.

224. Chang, C.F. 1982. Pasteurella multocida-serotypes, biochemical characteristics and drug susceptibility-isolated in Taiwan. Taiwan Journal of Veterinary Medicine and Animal Husbandry 40:47-52.

Keywords: serotyping, strain comparison, biochemical test, antibiotic sensitivity, Taiwan, antibiotic, chicken, goose, duck, swine

Notes: P.M. isolates from swine, chickens, ducks and geese were serotyped using both somatic and capsular antigens. The sugar fermentation patterns of isolates obtained prior to to 1970 were uniform, unlike the recent isolates, and they showed less resistance to antibiotics than recent isolates

225. Chang, C.F. 1973. Serological and biochemical studies on Pasteurella multocida isolated in Taiwan. Taiwan Journal of Veterinary Medicine and Animal Husbandry 22:33-38.

Keywords: swine, strain comparison, serotyping, biochemical test, Taiwan, serotype 5, serotype A

Notes: Of the 74 isolates from chickens, ducks and pigs from Taiwan, 43 could be typed by both somatic and capsular antigen (all belonged to serotype 5:A). Swine were considered as a potential reservoir, since swine strains of serotype 5 were pathogenic for birds.

226. Chang, C.F. 1971. Serological studies on Pasteurella multocida isolated in Taiwan (Chinese/E). Taiwan Journal of Veterinary Medicine and Animal Husbandry 7(3):84-89.

Keywords: serotyping, strain comparison, swine, chicken, Taiwan

Notes: (ONS)

227. Chang, C.F. and C.M. Cheng. 1970. Serological studies on Pasteurella multocida isolated in Taiwan. Chinese Journal of Microbiology 3(3-4):141-142.

Keywords: serotyping, Taiwan, strain comparison

Notes: (ONS)

228. Chang, W.H. and G.R. Carter. 1976. Multiple drug resistance in Pasteurella multocida and Pasteurella haemolytica from cattle and swine. Journal of the American Veterinary Medical Association 169(7):710-712.

Keywords: treatment, antibiotic sensitivity, P.haemolytica, strain comparison, antibiotic

Notes: About 80 percent of P.M. isolates and 92 percent of P. haemolytica isolates had various resistance patterns to streptomycin, penicillin, tetracycline and chloramphenicol.

229. Chang, Y.F., H.W. Renshaw and R. Young. 1987. Pneumonic pasteurellosis: examination of typable and untypable Pasteurella haemolytica strains for leukotoxin production, plasmid content, and antimicrobial susceptibility. American Journal of Veterinary Research 48(3):378-384.

Keywords: plasmid, leukotoxin, P.haemolytica, cattle, serotyping, related bacteria, antibiotic sensitivity, strain comparison, hemolysin

Notes: The production of neither hemolysin nor leukotoxin by P. haemolytica seemed to be plasmid mediated. Leukotoxin production was a stable phenotypic characteristic of pathogenic P. haemolytica not related to the presence of plasmids. Ampicillin and penicillin resistance was coded for by a plasmid of approximately 5,200 base pairs.

230. Chang, Y.F., R. Young, D. Post and D.K. Struck. 1987. Identification and characterization of the Pasteurella haemolytica leukotoxin. Infection and Immunity 55(10):2348-2354.

Keywords: toxin, related bacteria, P.haemolytica, leukotoxin, fluorescent antibody test, polypeptide fragment

Notes: The leukotoxin of P. haemolytica had a molecular weight of greater than 400,000 and had a 105 kilodalton polypeptide as its major protein component. Antisera raised against the polypeptide neutralized toxin activity and labeled the bacterial cell surface in a non-uniform, punctate manner.

231. Chang, Y.F., H.W. Renshaw and J.L. Augustine. 1985. Bovine pneumonic pasteurellosis: chemiluminescent response of bovine peripheral blood leukocytes to living and killed Pasteurella haemolytica, Pasteurella multocida and Escherichia coli. American Journal of Veterinary Research 46(11):2266-2271.

Keywords: leukocyte, cattle, cellular immunity, related bacteria, P.haemolytica, Escherichia coli, neutrophil, polymorphonuclear leukocyte, toxin, hexose monophosphate shunt

Notes: A luminol-dependent chemiluminescence assay was used to evaluate the response on bovine polymorphonuclear leukocytes to living and killed bacteria.

232. Chanter, N., J.M. Rutter and A. Mackenzie. 1986. Partial purification of an osteolytic toxin from Pasteurella multocida. Journal of General Microbiology 132(4):1089-1097.

Keywords: osteolytic toxin, toxin purification, swine, atrophic rhinitis, chromatography, toxin, serotype D

Notes: A protein toxin composed of one polypeptide was purified from sonicated cells of type D strain of P.M.

233. Chanter, N., J.M. Rutter and P.D. Luther. 1986. Rapid detection of toxigenic Pasteurella multocida by an agar overlay method. Veterinary Record 119(25-26):629-630.

Keywords: detection, cell culture, bovine lung cell, toxin detection, toxin, cattle

Notes: A rapid technique was developed for the identification of toxigenic P.M. involving the passage of colonies onto an agar overlay of a confluent monolayer of embryonic bovine lung cells.

234. Char, N.L., M.R.K. Rao, D.R.L. Sarma and D.L. Khan. 1987. Report on mortality in ducklings

due to fowl cholera. Poultry Adviser 20(1):45-47.

Keywords: duck, case report, treatment, control, antibiotic

Notes: (ONS)

235. Char, N.L., P. Rao, D.I. Khan and D.R.L. Sarma. 1982. A note on an outbreak of pasteurellosis in poultry. Indian Journal of Poultry Science 17(2):175-176.

Keywords: case report, India, Andhra Pradesh, chicken

Notes: An avian cholera outbreak in January, 1982 involved 20,000 white Leghorn layers in Andhra Pradesh

236. Chatelain, R., H. Bercovier, A. Guiyoule, C. Richard and H.H. Mollaret. 1979. Differentiation of Pasteurella and Actinobacillus from Enterobacteriaceae by use of the O/129 vibriostatic agent (French/E). Annales Microbiologie (Institute Pasteur) 130A:449-454.

Keywords: differentiation, characterization, Actinobacillus, Yersinia, Enterobacteriaceae, related bacteria, identification, vibriostatic agent, O/129

Notes: The use of the O/129 vibriostatic agent as a growth inhibitor quickly differentiated between typical or atypical enterobacteria, Pasteurella and Actinobacillus.

237. Chattopadhyaya, S.K., B.B. Mallick and S.K. Kulshrestha. 1972. Observation on the mortality of chicks and chickens. Indian Journal of Animal Health 35:35-38.

Keywords: case report, Escherichia coli, India, detection, related bacteria, chicken

Notes: The occurrance of bacterial agents in septicemic form on poultry farms in India is described.

238. Chen, P.Y., S.F. Yuan, Q.E. Liu, G.L. Xu and Y.J. Li. 1984. Diagnosis, prevention and treatment of pasteurellosis in zoo waterfowl (Chinese). Chinese Journal of Veterinary Medicine 10(3):14-15.

Keywords: host range, waterfowl, China, treatment, diagnosis, prevention

Notes: (ONS)

239. Chen, T.J., J.H. Liang, H.J Li, M.Z. Zeng and Z.M. Wang. 1985. Immunity conferred by attenuated fowl cholera vaccines to pasteurellosis (serotype A) in pigs (Chinese). Guangdong Agricultural Science 2:37-41.

Keywords: swine, vaccine, serotype A, immunization

Notes: (ONS)

240. Chenchev, I., M. Mateev, N. Shishkov, I. Dumanov and T. Tsonev. 1966. On the incidence of Pasteurella carriers in poultry flocks (Russian). Veterinariya (Moscow) 8:42-45.

Keywords: carrier, chicken, USSR

Notes: The occurrance of P.M. carriers in Russian poultry farms is described.

241. Chengappa, M.M., G.R. Carter and W.E. Bailie. 1986. Identification of type D Pasteurella multocida by counterimmunoelectrophoresis. Journal of Clinical Microbiology 24(5):721-723.

Keywords: serotyping, detection, strain comparison, hemagglutination, rabbit, swine, serotype D, snuffles, atrophic rhinitis, counterimmunoelectrophoresis, acriflavin

Notes: The counterimmunoelectrophoresis test was found to be more rapid and simpler to perform than the indirect hemagglutination test and was more sensitive than the acriflavin test.

242. Chengappa, M.M., G.R. Carter and W.E. Bailie. 1984. Comparison of indirect hemagglutination and rapid plate agglutination tests with counterimmunoelectrophoresis for typing Pasteurella haemolytica. Journal of Clinical Microbiology 20(4):660-663.

Keywords: counterimmunoelectrophoresis, agglutination, serotyping, comparison, detection, P.haemolytica, related bacteria

Notes: The use of a simple and rapid counterimmunoelectrophoresis test for serotyping cultures of P. haemolytica showed perfect correlation with the traditional indirect hemagglutination and rapid plate agglutination tests.

243. Chengappa, M.M., R.C. Myers and G.R. Carter. 1982. Capsular and somatic types of Pasteurella multocida from rabbits. Canadian Journal of Comparative Medicine 46(4):437-439.

Keywords: serotyping, capsular antigen, somatic antigen, serotype A, serotype 12, rabbit, hyaluronidase

Notes: A total of 74 of 79 isolates of P.M. from rabbits were capsular type A and five were type D. Somatic type 12 was the dominant serotype.

244. Chengappa, M.M., G.R. Carter and T.S. Chang. 1979. A streptomycin-dependent live *Pasteurella multocida* type-3 vaccine for the prevention of fowl cholera in turkeys. Avian Diseases 23(1):57-61.

Keywords: vaccine, streptomycin dependance, serotype 3, turkey, mutant

Notes: A live streptomycin-dependent P.M. vaccine was found to protect turkeys orally and parenterally against homologous challenge.

245. Chengappa, M.M. and G.R. Carter. 1979. Improved method for obtaining streptomycin-dependent mutants from *Pasteurella multocida* and *Pasteurella haemolytica*, using N-Methyl-N'-Nitro-N-Nitrosoguanidine. American Journal of Veterinary Research 40(3):449-450.

Keywords: streptomycin dependance, P.haemolytica, virulence, vaccine, mutation, serotype 1, serotype A, related bacteria, N-methyl-N'-nitro-N-nitrosoguandidine

Notes: A modified and improved procedure for obtaining streptomycin-dependent mutants of type A P.M. and type 1 *P. haemolytica* by using N-methyl-N'-nitro-N-nitrosoguanidine is described.

246. Chengappa, M.M. and G.R. Carter. 1977. Demonstration of bacteriocin activity in bovine and bison strains of *Pasteurella multocida*. American Journal of Veterinary Research 38(8):1183-1185.

Keywords: bacteriocin, bovine, bison, bacteriocin induction, plasmid

Notes: A total of 14 of 33 strains of P.M. had bacteriocin activity and 17 were susceptible to bacteriocin. An extrachromosomal genetic element was not detected

247. Cheprov, L.P. and S.K. Bzhezhinskii. 1965. Influence of antibiotics on development of pasteurellosis immunity in chickens (Russian). Veterinariya (Moscow) 6:29-31.

Keywords: antibiotic, vaccine, chicken, interaction, immunity, immunosuppression

Notes: The interactions of antibiotics and vaccines in the development of immunity in chickens is discussed.

248. Chesney, K.F. 1978. Live fowl cholera vaccine benefits breeder turkeys. Feedstuffs 50(40):11-12.

Keywords: turkey, vaccine, immunization

Notes: (ONS)

249. Chladek, D.W. and R.P. Ellis. 1979. Serologic study of *Pasteurella aerogenes* sp. n. American Journal of Veterinary Research 40(3):446-448.

Keywords: P.aerogenes, related bacteria, Actinobacillus, P.pneumotropica, Yersinia pseudotuberculosis, P.pseudotuberculosis, strain comparison

Notes: Serologically distinct strains of *P. aerogenes* may exist. Antiserum raised against this new bacterial species reacted well with *Yersinia pseudotuberculosis* (*P. pseudotuberculosis*) and *P. pneumotropica*.

250. Choi, C.S. 1986. Suspected bacterial, viral and rickettsial zoonotic infections in humans and animals in Korea (Korean/E). Korean Journal of Veterinary Public Health 10(1):37-63.

Keywords: human, man, transmission

Notes: (ONS)

251. Choi, C.S. and H.S. Lee. 1971. Capsular-serotyping of *Pasteurella multocida* isolated from pneumonic pigs (Korean/E). Korea (Repub) Nongch'on Jin Heung Chung Res Rep Vet. 14:23-26.

Keywords: capsular antigen, serotyping, swine, pneumonia, strain comparison

Notes: (ONS)

252. Choudat, D., C. Legoff, B. Delemotte, G. Paul, V. Mady, J. Fages and F. Conso. 1987. Occupational exposure to animals and antibodies against *Pasteurella multocida*. British Journal of Industrial Medicine 44:829-833.

Keywords: cattle, human, antibody, serology, chicken, bite, serotype A, dog, cat

Notes: Occupational exposure of humans to cattle in slaughterhouses or on breeding farms resulted in a higher incidence of antibodies to serotype C than did exposure to chickens. The prevalence of antibodies to type D did not differ significantly between groups. There was also a relationship between antibodies to serotype A and pet ownership. Infection with P.M. may frequently be subclinical.

253. Choudat, D., G. Paul, C. Legoff, L. Choudat and J. Marsac. 1987. Human Pasteurella multocida infection . Usefulness of serology (French/E). Presse Medicale 16(34):1681-1684.

Keywords: serology, human, serotype A, capsular antigen, somatic antigen, hemagglutination, agglutination, antibody, serotype 3, serotype 7

Notes: High titers of antibodies to serotypes A3 and A7 were found in five human cases. Antibody kinetics were similar to those observed in animals. The usefulness of serology to detect human cases due to exposure to animals is discussed.

254. Choudat, D., G. Paul, C. Legoff, L. Choudat, A. Philippon, P. Perreau and J. Marsac. 1987. Specific antibody response to Pasteurella multocida. Scandinavian Journal of Infectious Diseases 19(4):453-457.

Keywords: man, human, serology, somatic antigen, capsular antigen, hemagglutination, agglutination

Notes: Serologic diagnosis of P.M. infections in humans was an alternative to direct diagnosis when cultures were negative or when unusual localizations had to be confirmed.

255. Choudat, D., C. Legoff, L. Choudat, D. Poggi, P. Nevot and P. Perreau. 1986. Family pets and antibodies against Pasteurella multocida in an urban population (French). Medecine et Maladies Infectienses 16:13-17.

Keywords: man, cat, dog, bite, transmission, reservoir

Notes: (ONS)

256. Choudat, D., C. Legoff, G. Paul, L. Choudat, J. Marsac and P. Nevot. 1985. Serodiagnosis of respiratory infections caused by Pasteurella multocida (French). Rev. Mal. Prespir. 2:325.

Keywords: serology, man, diagnosis, respiratory disease

257. Choudhury, K.A., A.J. Sarker and M.M. Amin. 1985. In-vitro sensitivity of P. multocida isolated from chickens and ducks to various chemotherapeutic agents. Bangladesh Veterinary Journal 19(1/4):77-82.

Keywords: treatment, chloramphenicol, tetracycline, nitrofuran, chicken, duck, antibiotic, antibiotic sensitivity

Notes: (ONS)

258. Choudhury, K.A., M.M. Amin, A. Rahman and R. Ali. 1985. Investigation of natural outbreaks of fowl cholera. Bangladesh Veterinary Journal 19(1/4):49-56.

Keywords: chicken, case report, Bangladesh, India

259. Chute, H.L., D.C. O'Meara and M. Gershman. 1962. Bacterins and drugs for the control of experimental fowl cholera. Avian Diseases 6:7-13.

Keywords: antibiotic, vaccine, treatment, beta-propiolactone, erythromycin, oxytetracycline

Notes: The effectiveness of bacterins prepared by killing the P.M. organism with formalin and beta-propiolactone and comparison of these results with the effects of drug treatments are reported.

260. Cifonelli, J.A., P.A. Rebers and K.H. Heddleston. 1970. The isolation and characterization of hyaluronic acid from Pasteurella multocida. Carbohydrate Research 14(2):272-276.

Keywords: virulence, related bacteria, hyaluronic acid, capsular antigen, streptococcus

Notes: Chemical characterization of a highly purified electrophoretically homogenous polysaccharide preparation isolated from P.M. indicated its identity with hyaluronic acid of streptococcal origin.

261. Clark, D.S. and J.F. Godfrey. 1960. Atypical Pasteurella infections in chickens. Avian Diseases 4(2):280-290.

Keywords: pathogenesis, strain comparison, chicken, infectious coryza, California, coryza

Notes: Two strains of Pasteurella, biochemically and serologically different from P.M., were important secondary invaders often associated with infectious coryza in chickens in California.

262. Clark, G.M. and L.N. Locke. 1962. Case Report: Observations on pseudotuberculosis in common grackles. Avian Diseases 6(4):506-510.

Keywords: case report, P.pseudotuberculosis, Quiscalus quiscula, pseudotuberculosis, related bacteria, host range, grackle, wild bird

Notes: Pasteurella pseudotuberculosis was implicated in two cases of epizootic disease in eastern purple grackles (Quiscalus quiscula).

263. Clemons, K.V. and J.L. Gadberry. 1982. Increased indole detection for *Pasteurella multocida*. Journal of Clinical Microbiology 15(4):731-732.

Keywords: growth, strain comparison, biochemical test, identification, indole

Notes: A supplemented 2% peptone broth was used for the detection of indole production by P.M. All 96 isolates of P.M. from man, animals and birds tested were indole positive within 18 to 24 hours.

264. Coates, S.R., M.M. Jensen and E.D. Brown. 1977. The response of turkeys to varying doses of live oral *Pasteurella multocida* vaccine. Poultry Science 56(1):273-276.

Keywords: vaccine, treatment, prevention, serology, turkey

Notes: Turkeys vaccinated by the drinking water route against fowl cholera with varying doses of the low virulence Clemson University strain of P.M. gave varying responses after challenge with virulent P.M.

265. Coates, S.R., D.K. Buckner and M.M. Jensen. 1977. The inhibitory effect of *Corynebacterium parvum* and *Pasteurella multocida* pretreatment on staphylococcal synovitis in turkeys. Avian Diseases 21(2):319-322.

Keywords: immunity, turkey, Corynebacterium parvum, Staphylococcus aureus, related bacteria, immunostimulation, staphylococcal synovitis, synovitis

Notes: *Corynebacterium parvum* and P.M. were immunostimulants in turkeys, increasing the ability of whole blood to kill *Staphylococcus aureus* and prolonging the incubation time of experimental staphylococcal synovitis.

266. Collins, F.M. 1984. Effect of aztreonam on the growth of *Pasteurella multocida* in the lung. American Journal of Veterinary Research 45(5):972-975.

Keywords: treatment, antibiotic, mice, cattle, aztreonam, beta-lactam antibiotic

Notes: Mice adequately treated with aztreonam survived infection with P.M. and developed active immunity. With an inadequate dose, bacteria persisted in the lungs and spleen.

267. Collins, F.M., C.J. Niederbuhl and S.G. Campbell. 1983. Bactericidal activity of alveolar and peritoneal macrophages exposed in vitro to three strains of *Pasteurella multocida*. Infection and Immunity 39(2):779-784.

Keywords: macrophage, phagocytosis, strain comparison, rabbit, mice, turkey, cattle, location, pathogenesis, virulence, opsonin, immunity

Notes: Turkey and calf isolates were highly virulent for mice. A rabbit strain was avirulent for mice. All three strains were inactivated rapidly by normal mouse peritoneal macrophages provided the bacteria were preopsinized. The importance of the different phagocytic cell populations in the uptake and killing of opsonized P.M. cells was discussed.

268. Collins, F.M., C.J. Niederbuhl and S.G. Campbell. 1983. Bactericidal activity of alveolar and peritoneal macrophages exposed in vitro to three strains of *Pasteurella multocida*. Infection and Immunity 39(2):779-784.

Keywords: strain comparison, immunity, macrophage, mice, opsonin, virulence

Notes: The phagocytic and bactericidal abilities of alveolar and peritoneal macrophages exposed in vivo and in vitro to P.M. strains of different virulence for mice are compared.

269. Collins, F.M. and W.H. Woodruff. 1979. Inactivation of *Pasteurella multocida* within the mouse peritoneal cavity. Zentralblatt fur Bakteriologie Abteilung Originale A. 245:106-113.

Keywords: immunity, inactivation, cellular immunity, polymorphonuclear leukocyte, opsonin, phagocytosis

Notes: The ability of specific opsonins to stimulate the uptake and killing of P.M. by peritoneal exudate cells of varying composition was quantified in an effort to determine the role of these cells in defending against P.M. infection.

270. Collins, F.M. 1977. Mechanisms of acquired resistance to *Pasteurella multocida* infection: a review. Cornell Veterinarian 67(1):103-138.

Keywords: vaccine, immunity, adjuvant, host range, review

Notes: The antigenic structure and host susceptibility of P.M., immunization with bacterins, cell extracts, adjuvanted vaccines and live vaccines and the mechanisms of acquired immunity in man, domestic animals and birds are discussed.

271. Collins, F.M. 1973. Growth of *Pasteurella multocida* in vaccinated and normal mice. Infection and Immunity 8:868-875.

Keywords: immunization, active immunity, passive immunity, vaccine, mice, humoral immunity, opsonin

Notes: Active or passive immunization of mice decreased the ability of P.M. to multiply in the organs and tissues of mice, a change attributed to a humorally-mediated immunity.

272. Collins, M.T., N. Weaver and R.P. Ellis. 1981. Identification of Pasteurella multocida and Pasteurella haemolytica by API 20E, Minitek, and Oxi/Ferm Systems. Journal of Clinical Microbiology 13(3):433-437.

Keywords: P.haemolytica, biochemical test, identification, related bacteria

Notes: The API 20E strip, the Oxi/Ferm tube and the Minitek system all failed to reliably identify 50 serotyped isolates each of P.M. and of P. haemolytica.

273. Collins, M.T. and E.C. Swanson. 1981. Use of the API-20E system to identify non-Enterobacteriaceae from veterinary medical sources. American Journal of Veterinary Research 42(7):1269-1273.

Keywords: detection, related bacteria, strain comparison, biochemical test, identification, gram-negative bacteria

Notes: The API 20E system correctly identified 62 percent of non-enteric or non-fermentative gram-negative isolates.

274. Compagnucci, M., F. Martone and P. Pagnini. 1969. The effect of heat, chemotherapeutics and some disinfectants on P. multocida studied with Warburg and electronic microscope (Italian/E). Acta Medica Veterinaria 15(6):495-515.

Keywords: ultrastructure, disinfectant, antibiotic, electron microscopy, virulence, heat, temperature

Notes: The effect of heat, disinfectants and some chemotherapeutics on P.M. was determined to be a progressive reduction or blockage of oxygen consumption and by cellular damage.

275. Cooper, J.E. 1973. Pasteurellosis in a wild Kenyan rodent, Praomys natalensis. Journal of Zoology 172:467-469.

Keywords: Praomys natalensis, rodent, related bacteria, case report, host range, pyemia, Kenya, reservoir, Africa

Notes: The first recorded case of a pyemia caused by P.M. in a wild Kenyan rodent is reported.

276. Cooper, J.E. 1969. Some diseases of birds of prey. Veterinary Record 84(18):454-457.

Keywords: pneumonia, review, raptor, host range

Notes: The disease problems associated with captive birds of prey and the importance of good management is stressed. P.M. is briefly mentioned under Respiratory Diseases.

277. Cooper, V. 1948. Some veterinary problems of the Cape Western area. Journal of the South African Veterinary Medical Association 19(4):146-150.

Keywords: case report, South Africa, chicken

Notes: A summary of diseases including avian cholera and its incidence in the Western Province is reported.

278. Corbeil, L.B., D.S. Strayer, E. Skaletsky, A. Wunderlich and S. Sell. 1983. Immunity to pasteurellosis in compromised rabbits. American Journal of Veterinary Research 44(5):845-850.

Keywords: rabbit, snuffles, stress, immunosuppression, Shope fibroma virus, immunoprophylaxis, vaccine

Notes: Pasteurellosis in a rabbit inocculated with a malignant variant of Shope fibroma virus was presented as a model for the study of immunosuppression and immunoprophylaxis in pasteurellosis.

279. Corrado, A. 1970. On the susceptibility of Japanese quail (Coturnix coturnix japonica) to chicken pathogens (Italian/E). Nuovo Progresso Veterinario 46(1):49-52.

Keywords: Japanese quail, quail, chicken, Coturnix coturnix japonica, host range

Notes: Japanese quail did not become infected with three avian viruses (Newcastle disease, infectious bronchitis and laryngotracheitis), Mycoplasma gallisepticum and P.M.

280. Corrigan, J.J. and J.F. Kiernat. 1979. Effect of polymyxin B sulfate on endotoxin activity in a gram-negative septicemia model. Pediatric Research 13:48-51.

Keywords: polymyxin B, endotoxin, septicemia, antibiotic, treatment, rabbit, Limulus test, toxin

Notes: Polymyxin B was effective in neutralizing the endotoxic effects caused by the live bacteria. Quantitative plasma endotoxin determination was made more sensitive by prior heating of the plasma.

281. Corrigan, J.J. and J.F. Kiernat. 1975. Effect of heparin in experimental gram-negative septicemia. Journal of Infectious Diseases 131(2):138-143.

Keywords: heparin, gram-negative bacteria, rabbit, pathogenesis, disseminated intravascular coagulation, fibrinogen

Notes: The survival rate in septicemic rabbits given heparin as an anticoagulant was not improved, although fibrinogen consumption (disseminated intravascular coagulation) was abolished.

282. Cover, M.S. 1957. A review of chemotherapy of avian viral and bacterial infections. Journal of the American Veterinary Medical Association 465-469.

Keywords: antibiotic, treatment, Delaware, sulfonamide, review

Notes: The effectiveness of antibiotics and sulfonamides against avian diseases including avian cholera is reviewed.

283. Cox, H.U., D.G. Luther, S.S. Newman and A.F. Roy. 1981. Comparison of antibiograms determined by disk diffusion and microdilution methods for selected gram-negative bacilli. American Journal of Veterinary Research 42(3):546-551.

Keywords: detection, antibiotic, antibiotic sensitivity, gram-negative bacteria

Notes: Antimicrobial susceptibilities of bacteria from different species were compared by the quantitative broth microdilution and the standard disk agar diffusion methods. The microdilution method provided more clinically relevant information than did the agar diffusion method.

284. Craft, D.L., M.M. Chengappa and G.R. Carter. 1987. Differentiation of *Pasteurella haemolytica* biotypes A and T with lectins. Veterinary Record 120:393.

Keywords: lectin, strain comparison, related bacteria, P.haemolytica, agglutination

Notes: Wheat germ lectin agglutinated *P. haemolytica* type T but not type A, possibly due to differences in sugar moeities between the two types.

285. Currie, J.A., J.D.Jr. Marshall and D. Crozier. 1966. The detection of *Pasteurella pseudotuberculosis* antibodies by the microhemagglutination test. Journal of Infectious Diseases 116(2):117-122.

Keywords: related bacteria, detection, P.pseudotuberculosis, hemagglutination, serology, antibody, P.pestis

Notes: A microhemagglutination test for *P. pseudotuberculosis* antibody detection was developed and had no cross reactions with sera having high titer *P. pestis* antibody. There was some cross-reaction at low dilution with serum from patients with group B or D *Salmonella*

286. Curtis, P.E. 1985. *Pasteurella multocida*. Technical Series of the Society for Applied Bacteriology 21:43-52.

Keywords: review

Notes: A general review of P.M. is presented.

287. Curtis, P.E. 1983. Transmission of *Pasteurella multocida* infection from the brown rat (*Rattus norvegicus*) to domestic poultry. Veterinary Record 113(6):133-134.

Keywords: transmission, turkey, chicken, brown rat, Rattus norvegicus, rat, rodent, reservoir

Notes: Experiments showed that a rat bite transmited P.M. infection to turkeys and chickens.

288. Curtis, P.E. and G.E. Ollerhead. 1982. *Pasteurella multocida* infection of cats on poultry farms. Veterinary Record 110(1):13-14.

Keywords: turkey, chicken, mice, cat, reservoir, transmission

Notes: Three cat strains of P.M. were considered capable of causing avian cholera.

289. Curtis, P.E. and G.E. Ollerhead. 1981. Investigation to determine whether healthy chickens and turkeys are oral carriers of *Pasteurella multocida*. Veterinary Record 108(10):206-207.

Keywords: transmission, pathogenesis, chicken, turkey, carrier

Notes: Oral swabs of birds from flocks with and without a history of avian cholera were examined to determine the extent to which healthy turkeys and chickens are P.M. carriers.

290. Curtis, P.E., G.E. Ollerhead and C.E. Ellis. 1980. Virulence and morphology of *Pasteurella multocida* of avian origin. Veterinary Record 107(5):105-108.

Keywords: virulence, chicken, turkey, strain comparison, colony morphology

Notes: Evidence showed a considerable range in the virulence of P.M. isolates, but no correlation between cellular or colonial morphology and virulence was detected.

291. Curtis, P.E., G.E. Ollerhead and C.E. Ellis. 1980. *Pasteurella multocida* infection of poultry farm rats. Veterinary Record 107(14):326-327.

Keywords: transmission, Rattus norvegicus, virulence, serotyping, detection, mouse inoculation, culture, turkey, chicken, reservoir, mice, host range, rat, rodent

Notes: Avian cholera was present on two farms with rats having a P.M. prevalence of 41 percent by the mouse inoculation test and 14 percent by culture. The same serotype was present in rats and poultry.

292. Curtis, P.E. 1979. Observations on avian pasteurellosis in Britain. Veterinary Record 104(21):471-474.

Keywords: serology, chicken, turkey, blackbird, blackheaded gull, kestrel, lapwing, spotted fly catcher, starling, tawny owl, strain comparison, goose, case report, host range, wild bird

Notes: An investigation into the extent and significance of P.M. infections of wild birds and poultry over a three year period in Britain is reported.

293. Curtis, P.E. and G.E. Ollerhead. 1979. Transferable oxytetracycline resistance in avian *Pasteurella multocida*. Veterinary Record 104(14):327.

Keywords: antibiotic resistance, turkey, serology, oxytetracycline, treatment, antibiotic

Notes: A possible transfer of oxytetracycline resistance occurred between isolates of P.M. in an outbreak of avian cholera in turkeys.

294. Curtis, P.E. and G.E. Ollerhead. 1978. *Pasteurella multocida* infection of broiler chickens. Veterinary Record 103(14):312-313.

Keywords: case report, detection, treatment, serotyping, chicken, antibiotic, tetracycline, control

Notes: In the seven field outbreaks of avian cholera described, no evidence of unusual resistance to 18 drugs was found and early tetracycline treatment with improved hygiene and ventilation gave effective control.

295. Curtis, P.E. 1976. Serotyping British isolates of *P. multocida* from avian species. Veterinary Record 99(13):256-257.

Keywords: serotyping, strain comparison, turkey, duck, goose, chicken, wild bird, Britain, agar gel immunodiffusion

Notes: Specific antisera were produced in chickens to 14 Heddleston type strains and used in gel diffusion tests on antigens prepared from 50 P.M. isolates.

296. Czuprynski, C.J., H.L. Hamilton and E.J. Noel. 1987. Ingestion and killing of *Pasteurella haemolytica* A1 by bovine neutrophils in vitro. Veterinary Microbiology 14:61-74.

Keywords: phagocytosis, cellular immunity, neutrophil, P.haemolytica, related bacteria, opsonin, antibody

Notes: Ingestion of *P. haemolytica* was serum dependent and was mediated principally by heat-stable opsonins, presumably antibodies, that could be removed by adsorption with killed bacterial cells.

297. D'Alecy, L.G. and M.J. Kluger. 1975. Avian febrile response. Journal of Physiology 253(1):223-232.

Keywords: Columba livia, fever, pigeon, febrile response, host range

Notes: Varying doses of killed P.M. cells produced a complex dose-dependent febrile response. Antipyretics effectively attenuated the response.

298. Damodaran, S. and S. Viswanathan. 1975. Pasteurellosis in turkeys. Cheiron 4(2):122-125.

Keywords: turkey, histopathology, case report, India

Notes: The first report is made of an outbreak of acute avian cholera in India in turkeys with gross and histopathologic changes.

299. Darnell, K.R., M.E. Hart and F.R. Champlin. 1987. Variability of cell surface hydrophobicity among *Pasteurella multocida* somatic serotype and *Actinobacillus lignieresii* strains. Journal of Clinical Microbiology 25(1):67-71.

Keywords: lipopolysaccharide, cell surface, hydrophobicity, antibiotic, Actinobacillus lignieresii, taxonomy

Notes: Cell suface hydrophobicity in P.M. was influenced by the type of lipopolysaccharide present but was not directly related to permeability of the antibiotics examined.

300. Das, M.S. 1958. Studies on Pasteurella septica (Pasteurella multocida). Observations on some biophysical characters. Journal of Comparative Pathology 68:288-294.

Keywords: culture medium, growth, bacterial antagonism, biochemistry, India, antagonism, medium, isolation

Notes: Biochemical and cultural studies using different temperatures and carbon dioxide levels are reported.

301. Dashi, A. and P. Carcani. 1986. Development of a mineral oil vaccine against fowl cholera (Albanian/E). Buletini i Shkencave Zooteknike e Veterinare 4(3):69-73.

Keywords: vaccine, chicken, adjuvant, immunization, Albania

Notes: (ONS)

302. Davis, R.B., J. Brown, D.L. Dawe, J.W. Foster and K.K. Srivastava. 1970. Fowl cholera immunization in turkeys. III. Significance of market quality in the evaluation of fowl cholera vaccines. Applied Microbiology 19(5):844-847.

Keywords: vaccine, consumption, turkey, immunization, secondary effect

Notes: Turkeys vaccinated with various vaccines and a commercial bacterin for fowl cholera were killed after surviving challenge and the carcasses were examined for wholesomeness.

303. Davituliani, G.V. 1973. Distribution and persistance of tetracycline antibiotics in healthy fowls and fowls with experimentally induced pasteurellosis (Russian). Sbornik Trudov, Gruzinskii Zootekhnichesko-Veterinarnii Institut 38:115-118.

Keywords: tetracycline, chicken, antibiotic, treatment

Notes: (ONS)

304. Dawe, D.L., R.B. Davis, J. Brown, J.W. Foster and K.K. Srivastava. 1970. Fowl cholera immunization in turkeys. II. Use of experimental epornitic method to study vaccine efficacy in flocks of turkeys. Applied Microbiology 19(5):842-843.

Keywords: vaccine, contact exposure, challenge, turkey, evaluation

Notes: Vaccinated and control turkeys were challenged by exposure to turkeys artificially infected by intramuscular injection of P.M. organisms. Resultant death patterns from this contact method of challenge mimicked nature and for this reason it was the preferred method of evaluating vaccines.

305. DeAlwis, M.C.L. 1987. Serological classification of Pasteurella multocida. Veterinary Record 121(2):44.

Keywords: strain comparison, serotyping, antigen, classification

Notes: Various methods of classifying P.M. are discussed, and a case for a standard serotyping system is made.

306. DeAlwis, M.C.L., G.R. Carter and M.M. Chengappa. 1980. Production and characterization of streptomycin dependent mutants of Pasteurella multocida from bovine hemorrhagic septicemia. Canadian Journal of Comparative Medicine 44(4):418-422.

Keywords: streptomycin dependance, mutant, cattle, hemorrhagic septicemia

Notes: A large number of streptomycin dependent mutants were produced. Biochemically, all were uniform and similar to the wild type, and were avirulent to mice. The rate of reversion to streptomycin independence varied with each mutant.

307. Dean, W.F., J.I. Price and L. Leibovitz. 1973. Effect of feed medicaments on bacterial infections in ducklings. Poultry Science 52(2):549-558.

Keywords: drug, treatment, antibiotic, sulfadimethoxine,ormetoprim,P.anatipestifer, Escherichia coli, feed, duck, sulfonamide, related bacteria

Notes: Mortality in ducklings infected with P.M. was greatly lowered when they were fed a mixture of sulfadimethoxine and ormetoprim. However, these drugs were ineffective against P. anatipestifer and Escherichia coli.

308. Dees, S.B., J. Powell, C.W. Moss, D.G. Hollis and R.E. Weaver. 1981. Cellular fatty acid composition of organisms frequently associated with human infections resulting from dog bites: Pasteurella multocida and groups EF-4, IIj, M-5 and DF-2. Journal of Clinical Microbiology 14(6):612-616.

Keywords: fatty acid, identification, bite, human, man, dog, strain comparison

Notes: Analysis of cellular fatty acids provided an additional test for rapid differentiation of bacteria associated with dog bite infections.

309. DeJong, M.F. and G.H.A. Borst. 1985. Selective medium for the isolation of P. multocida and B. bronchiseptica. Veterinary Record 167.

Keywords: isolation, culture, selective medium, Bordetella bronchiseptica, swine, atrophic rhinitis, medium, related bacteria

Notes: A selective medium compared favorably with isolation in mice or on modified MacConkey medium.

310. Delaplane, J.P. 1949. The role of the sulfonamides in the prevention and control of the respiratory diseases of chickens. Journal of the American Veterinary Medical Association 115(868):40-42.

Keywords: sulfonamide, chicken, antibiotic, treatment, infectious coryza, coryza

Notes: Sulfonamides were of value in preventing two bacterial respiratory infections of chickens: infectious coryza and the respiratory form of avian cholera.

311. Delaplane, J.P. and T.C. Higgins. 1948. Sulfaquinoxaline in the prevention and control of chronic fowl cholera. Cornell Veterinarian 38:267-272.

Keywords: antibiotic, chicken, treatment, sulfonamide, sulfaquinoxaline

Notes: Thirty-two of 35 chickens inoculated with material containing P. avicida developed infection. Six of 93 birds receiving sulfaquinoxaline in their feed developed mild signs.

312. Delaplane, J.P. 1945. Sulfaquinoxaline in preventing upper respiratory infection of chickens inoculated with infective field material containing Pasteurella avicida. American Journal of Veterinary Research 6:207-208.

Keywords: antibiotic, chicken, treatment, sulfonamide, P.avicida, sulfaquinoxaline

Notes: Sulfaquinoxaline was of possible value in the prevention of avian cholera.

313. DeLaverne, E., P. Briquel, J.C. Burdin and J. Schmitt. 1961. Human pasteurellosis; a little understood aspect: forms due to secondary infection (French). Presse Medicale 69:1591-1593.

Keywords: man, secondary infection, pathogenesis

Notes: (ONS)

314. Demartini, J.C. and R.B. Davies. 1977. An epizootic of pneumonia in captive bighorn sheep infected with Muellerius sp. Journal of Wildlife Diseases 13:117-124.

Keywords: pneumonia, bighorn sheep, case report, P.haemolytica, secondary infection, Ovis canadensis, Muellerius, lungworm, host range

Notes: Large numbers of adult, larvae and eggs of the lungworm (Muellerius) were found in captive bighorn sheep with epizootic pneumonia. Both P.M. and P. haemolytica were isolated from the sheep.

315. Derieux, W.T. 1984. Response of broiler-type chickens to live Pasteurella multocida-duration of immunity and minimum dose. Avian Diseases 28(1):281-284.

Keywords: vaccine, chicken, duration of immunity, immunity

Notes: Various doses of avirulent P.M. were administered by stick-wing or subcutaneously. Results of challenge after 20 weeks indicated that protection was reduced when the dose by either route was lower than 6.1 X 10^[T4 viable organisms.

316. Derieux, W.T. 1983. Reaction of bobwhites, coturnix quail, guinea fowl, and mallards to avirulent and virulent Pasteurella multocida. Avian Diseases 27(2):539-541.

Keywords: coturnix quail, bobwhite quail, guinea fowl, mallard, portal of entry, virulence, vaccine, challenge, host range, waterfowl, quail

Notes: The Clemson University strain of P.M. was moderately virulent for coturnix quail by the oral route and highly virulent for bobwhite quail by stick-wing, but was avirulent for guinea fowl, providing them with immunity. Mallards did not react to virulent P.M. challenge.

317. Derieux, W.T. 1980. Effect of various feed additives on immune response of turkeys vaccinated with live Pasteurella multocida in drinking water. Avian Diseases 24(2):481-485.

Keywords: antibiotic, immunosuppression, turkey, treatment, immunization, secondary effect

Notes: Feed medications that acted systematically against P.M. significantly reduced the immune response to vaccination.

318. Derieux, W.T. and J.W. Dick. 1980. The response of broiler breeder chickens to parenteral administration of avirulent Pasteurella multocida. Avian Diseases 24(3):743-750.

Keywords: fowl pox, chicken, immunity, vaccine, immunosuppression, hatching, egg production, combined vaccine

Notes: Vaccination with avirulent P.M. did not reduce egg production or hatching of fertile eggs. Mixing fowl pox vaccine with avirulent P.M. did not reduce immunity to either disease.

319. Derieux, W.T. 1978. Response of young chickens and turkeys to virulent and avirulent Pasteurella multocida administered by various routes. Avian Diseases 22(1):131-139.

Keywords: chicken, turkey, susceptibility, transmission, portal of entry

Notes: Chickens were more resistant than turkeys to initial exposure to virulent P.M. but showed less resistance to subsequent exposure.

320. Derieux, W.T. 1977. Immune response of medicated turkeys vaccinated with live Pasteurella multocida. American Journal of Veterinary Research 38(4):487-489.

Keywords: turkey, vaccine, immunosuppression, antibiotic, ormetoprim, sulfonamide, sulfadimethoxine, treatment

Notes: Feeding sulfadimethoxine, ormetoprim, or a combination of both during vaccination reduced the level of immunity that resulted.

321. Derieux, W.T. 1976. Effect of furazolidone in feed on immune response of turkeys vaccinated with live Pasteurella multocida in drinking water. Avian Diseases 20(3):552-555.

Keywords: treatment, vaccine, immunosuppression, furazolidone, antibiotic, sulfonamide

Notes: Feeding a ration containing 0.011 percent furazolidone two to seven days before or one to five days after vaccination with P.M. had no effect on the immune response of turkeys poults.

322. Derieux, W.T. 1975. The Clemson University live cholera vaccine; is it as good as it's cracked up to be?. Turkey World 50:12-13,16-17.

Keywords: vaccine, review, immunization

Notes: The Clemson University live virus vaccine is reviewed.

323. Derieux, W.T. 1974. Serotype results of Pasteurella multocida isolated from poultry in South Carolina. Avian Diseases 18(2):265-266.

Keywords: serotyping, chicken, turkey, South Carolina

Notes: A listing is given by serotype of the total number of isolates made from turkeys and chickens.

324. Derylo, A. 1972. The economic and sanitary medical harmfulness of some bird lice (Mallophaga) parasitic in chickens (Polish). Medycyna Weterynaryjna 28(11):654-657.

Keywords: vector, transmission, Mallophaga, lice, chicken, reservoir

Notes: The role of avian lice in transmitting bacterial and parasitic disease agents, including P.M., to chickens is reported.

325. Derylo, A. 1970. Mallophaga as a reservoir of Pasteurella multocida (Polish). Acta Parasitologica Polonica 17(20/38):301-313.

Keywords: vector, Mallophaga, lice, chicken, transmission, Menacanthus stramineus, Menopon gallinae, Eomenacanthus stramineus, reservoir

Notes: Live, virulent P.M. was found in the feces of lice collected from hens that died from avian cholera.

326. Derylo, A. 1969. Mallophaga as vectors for Pasteurella multocida (Polish/E). Annales Universitatis Mariae Curie - Sklodowska, Sectio C: Biologia 24:355-366.

Keywords: transmission, vector, Mallophaga, lice, chicken, Eomenacanthus stramineus, Menopon gallinae, Menacanthus stramineus

Notes: Avian lice (Eomenacanthus stramineus and Menopon gallinae) transferred from hens killed by avian cholera to healthy hens transmitted the disease.

327. Derylo, A. 1967. The role of Mallophaga as carriers of pasteurellosis in fowl (Polish/E). Wiadomosci Parazytologiczne 13(4/5):619-623.

Keywords: vector, reservoir, parasite, Mallophaga, transmission, Menacanthus stramineus, Menopon gallinae, lice, Eomenacanthus stramineus

Notes: Infectious P.M. was found in hematophagous parasites that had fed on chickens that died from avian cholera

328. DeSaint-Aubert, G., J.M. Charles and D. Gaudry. 1972. An outbreak of Pasteurella anatipestifer infection in Muscovy ducks (French/E). Bulletin de la Societe des Sciences Veterinaires et de Medecine Comparee de Lyon 74(2):145-150.

Keywords: related bacteria, P.anatipestifer, duck, muscovy

Notes: (ONS)

329. Desmettre, P. and L. Valette. 1979. Avian pasteurellosis and colibacillosis. Bulletin de la Societe des Sciences Veterinaires et de Medecine Comparee de Lyon 81(3):135-140.

Keywords: vaccine, disinfection, Escherichia coli, review, prevention

Notes: The etiology, species susceptibility, symptoms, lesions, and diagnosis of the two infections are reviewed. Hygienic precautions such as early disinfection of eggs, and of premises and equipment, are emphasized. Available vaccines against the two infections are described.

330. Desmettre, P. and L. Valette. 1978. Antigenic structure of Pasteurella multocida, in relation to vaccine production (French/E). Developments in Biological Standardization 41:401-409.

Keywords: capsular antigen, somatic antigen, serotyping, vaccine, immunization, strain comparison, serotype A, serotype D, agar gel immunodiffusion, serotype B, serotype E

Notes: The role of somatic antigens of the P.M. capsular types A and D in immunization made it necessary to type the somatic antigens of the isolates prior to any action to induce immunity. The immunogenicity of capsular antigens of serotypes B and E was shown.

331. Devolt, H.M. 1948. Sulphathiazole as an aid to the control of fowl cholera in chickens and turkeys. American Journal of Veterinary Research 9(31):215-219.

Keywords: antibiotic, sulfonamide, chicken, treatment, sulfathiazole

Notes: A significant degree of resistance against artificial exposure to avian cholera was exhibited in fowl receiving sulfathiazole in the feed.

332. Devolt, H.M. and C.R. Davis. 1932. A cholera-like disease in turkeys. Cornell Veterinarian 22:78-80.

Keywords: case report, turkey

Notes: A disease outbreak similar to avian cholera in a flock of Bronze turkeys is reported.

333. Devos, A., N. Viaene, L. Spanoghe, L. Devriese and L. Okerman. 1978. Health situation among poultry and rabbits in Belgium during 1977 (Dutch/E). Vlaams Diergeneeskundig Tijdschrift 47(4):362-370.

Keywords: case report, rabbit, chicken, Belgium

Notes: (ONS)

334. Devos, A., N. Viaene, L. Spanoghe and L. Devriese. 1976. Health situation among poultry and rabbits in Belgium in 1975 (Dutch/E). Vlaams Diergeneeskundig Tijdschrift 45(5):184-202.

Keywords: chicken, case report, rabbit, Belgium

Notes: (ONS)

335. Devos, A., N. Viaene, M. Staelens and L. Spanoghe. 1964. Fowl cholera: diagnosis and treatment (Flemish/E). Vlaams Diergeneeskundig Tijdschrift 33(9/10):309-322.

Keywords: case report, chicken, turkey, duck, goose, antibiotic, chloramphenicol, treatment, vaccine, immunization

Notes: The symptomology, lesions and diagnoses of 78 cases of fowl cholera were recorded.

336. Dick, J.W. and J.W. Johnson. 1985. Fowl cholera immunity in broiler breeder chickens determined by the enzyme-linked immunosorbent assay. Avian Diseases 29(3):706-714.

Keywords: antibody, immunization, serology, chicken, ELISA, vaccine, enzyme-linked immunosorbent assay

Notes: Measurement of serum antibodies by enzyme-linked immunosorbent assay showed that all birds with a titer (log 10) above 6.02 at 56 weeks were immune to virulent P.M. challenge.

337. Dida, I. 1981. Animal health situation and disease prevention methods used in Romania (French). Bulletin de l'Office International des Epizooties 93(9/10):1289-1291.

Keywords: case report, Rumania, chicken

Notes: (ONS)

338. DiGiacomo, R.F., B.J. Deeb, B.L. Bernard, J.M. Klaassen and M.M. Chengappa. 1987. Safety and

efficacy of a streptomycin dependent live Pasteurella multocida vaccine in rabbits. Laboratory Animal Science 37(2):187-190.

Keywords: vaccine, immunization, streptomycin dependance, rabbit

Notes: A vaccine provided protection against chronic infection when rabbits were challenged by a homologous Pasteurella serotype and against severe infection when challenged with a heterologous Pasteurella serotype.

339. DiGiacomo, R.F., C.D.R. Jones and C.M Wathes. 1987. Transmission of Pasteurella multocida in rabbits. Laboratory Animal Science 37(5):621-623.

Keywords: rabbit, transmission, aerosol

Notes: Contact and airborne transmission of P.M. in rabbits was evaluated in an artificially controlled environment. Transmission by contact occurred more readily from rabbits with acute infections than from rabbits with chronic infections. However, airborne transmission to rabbits in adjacent cages did not occur.

340. Dimokh, P.P. and S.I. Leonchuk. 1976. Comparative effectiveness of emulsified vaccines against fowl cholera of chickens (Ukrainian). Veterinarya (Kiev) 43:32-35.

Keywords: vaccine, immunization, chicken, adjuvant, P.aviseptica

Notes: The efficacy of several vaccine preparations was tested.

341. Dimov, I. 1969. Methods of rendering avian strains of Pasteurella multocida avirulent (Russian). Nauchni Trudove Vissh Veterinarnomeditsinski Institute "Prof. D-r-G Pavlov" 21:9-14.

Keywords: vaccine, avirulent, attenuation method, immunization

Notes: The methods for preparing an attenuated vaccine strain of P.M. are reviewed.

342. Dimov, I. 1964. Survival of avian Pasteurella multocida in soils at different acidity, humidity and temperature (Russian). Nauchni Trudove Vissh Veterinarnomeditsinski Institute "Prof. D-r-G Pavlov" 12:339-345.

Keywords: survival, soil, temperature, pH, humidity

Notes: There was no difference in the survival of P.M. in sterile and non-sterile soils under different environmental conditions. Survival was best (113 days) at 3C, pH 7.15, an a moisture content of 50 percent. The bacteria died out quickly in soils with a moisture content of less than 40 percent.

343. Dinter, P.S. and W. Muller. 1984. The tenacity of bacteria in the airborne state. III. Communication: Principle studies of the epidemiology of P. multocida under the influence of tropical climates (German/E). Zentralblatt fur Bakteriologie Mikrobiologie und Hygiene, Abteilung I Originale B 179(2):139-150.

Keywords: survival, aerosol, humidity, resistance, temperature, half life

Notes: The survival of P.M. in a static aerosol chamber was best at 24C and 70 percent relative humidity with a half life of 35.5 minutes. The bacteria survived harsher environmental conditions if present as aggregates.

344. Donahue, J.M. and L.D. Olson. 1972. Biochemic study of Pasteurella multocida from turkeys. Avian Diseases 16(3):501-505.

Keywords: biochemical test, turkey, identification, indole

Notes: Isolates from avian cholera in turkeys were tested for the ability to produce indol, hydrogen sulphide and fermentation reactions in 14 carbohydrates.

345. Donahue, J.M. and L.D. Olson. 1972. The in vitro sensitivity of Pasteurella multocida of turkey origin to various chemotherapeutic agents. Avian Diseases 16(3):506-511.

Keywords: antibiotic, antibiotic sensitivity, turkey, strain comparison, bacitracin, oleandomycin, streptomycin

Notes: The sensitivity of 181 isolates of P.M. of turkey origin to 18 chemotherapeutic agents, and of 34 isolates to two drugs, were determined by the paper-disc method.

346. Donahue, J.M. and L.D. Olson. 1972. Characteristics of isolates of Pasteurella multocida obtained on consecutive or different years from the same turkey farms. Avian Diseases 16(3):529-534.

Keywords: serology, strain comparison, serotyping, biochemical test, turkey, reservoir, carrier

Notes: The fermentative, serological, and immunological properties of isolates obtained from the same farm in consecutive or different years, were compared. P.M. was enzootic on some of the farms studied.

347. Donahue, J.M. and L.D. Olson. 1971. Research technique. Inoculation of Pasteurella multocida into the palatine air spaces as an exposure method for fowl cholera in turkeys. Avian Diseases 15(1):158-162.

Keywords: turkey, exposure, transmission, portal of entry

Notes: This method produced uniform and consistent infections, with peak mortality five days postexposure.

348. Donahue, J.M. and L.D. Olson. 1971. Biochemic, serologic, and immunologic properties of isolates of Pasteurella multocida obtained from turkeys. Avian Diseases 15(4):901-909.

Keywords: autogenous immunity, biochemistry, characterization, biochemical test, agglutination, Missouri, turkey

Notes: A study of 10 isolates from turkeys in Missouri, using fermentation reactions, plate agglutination tests, and cross-protection assays is reported.

349. Donahue, J.M. and L.D. Olson. 1969. Survey of wild ducks and geese for Pasteurella spp.. Bulletin of the Wildlife Disease Association 5:201-205.

Keywords: Columba livia, Branta canadensis, Anas platyrhynchos, transmission, carrier, serology, detection, P.anatipestifer, mallard, waterfowl, wild bird, pigeon, Canada goose, host range, duck

Notes: P.M. was not isolated from nasal pharyngeal swabs or blood samples from 400 waterfowl and 37 feral pigeons. P. anatipestifer was isolated from 4 of 50 nasal pharyngeal swabs of Canada geese

350. Dorobantu, R., I. Andreescu, I. Togoe, G. Faur, P. Iles, M. Turco and I. Ivanescu. 1985. Comparison of properties of two avian vaccine strains of Pasteurella multocida (Clemson and FMV). II. Testing the immunogenic quality of live Clemson and FMV vaccines on chickens in a natural focus of avian cholera (Romanian/E). Revista de Cresterea Animalelor 35(4):31-35.

Keywords: vaccine, immunity, protection, control, subcutaneous, strain comparison

Notes: Vaccination of chickens with two subcutaneous doses of the FMV vaccine strain given at ages 105 and 136 days gave better protection than three doses of the Clemson University vaccine strain.

351. Dorobantu, R. 1985. Some specifications in relation to diagnosis of avian cholera (Romanian). Revista de Cresterea Animalelor 35(6):48-54.

Keywords: diagnosis, review

Notes: The pathological, histological, and bacteriological considerations for a diagnosis of avian cholera are reviewed.

352. Dorobantu, R. and I. Andreescu. 1984. Immunomodulation in fowl cholera (Romanian/E). Revista de Cresterea Animalelor 8:47-52.

Keywords: immunity, immunization, cellular immunity, vaccine

Notes: Addition of a mycobacterial immunostimulant to oil-emulsion P.M. vaccine, innoculated subcutaneously into 15 hens on two occasions (3 weeks apart), enhanced the degree of protection against challenge infection 25-34 days after the second vaccination.

353. Dorobantu, R., I. Andreescu, P. Iles and L. Draghia. 1983. A comparative study of the properties of two avian vaccinal strains of P. multocida (Clemson and FMV) (Romanian/E). Lucrari Stiintific Institutul Agronomic "N. Balcescu", Bucuresti. Seria C 26:69-74.

Keywords: vaccine, immunity, protection, strain comparison, chicken, rat, Rumania

Notes: An avirulent strain, FMV, isolated from a Romanian poultry farm was as immunogenic as the Clemson University vaccine strain of P.M.

354. Dorobantu, R. 1983. Immunity to fowl cholera. Centenary of the first vaccine (Romanian). Revista de Cresterea Animalelor 33(8):41-47.

Keywords: immunization, vaccine, review

Notes: The progress in P.M. vaccine development is reviewed.

355. Dorobantu, R. and S. Purcarea. 1982. Some characteristics of immunity to Pasteurella multocida in hens vaccinated with inactivated vaccines (Romanian/E). Lucrari Stiintific Institutul Agronomic "N. Balcescu", Bucuresti. Seria C 25:55-59.

Keywords: adjuvant, chicken, cellular immunity, vaccine

Notes: Immunity was greatest when hens were vaccinated three times instead of twice, homologous strains were used for vaccination and challenge, and when an oil adjuvant which induced cellular immunity was administered with the vaccine.

356. Dorobantu, R. 1982. Some concepts on fowl cholera (Romanian). Revista de Cresterea Animalelor 32(9):54-59.

Keywords: chicken, Rumania, review

Notes: A review of avian cholera emphasizing the problems with the disease in Rumania.

357. Dorobantu, R. 1978. Experimentally induced mastitis in ewes and cows with the fowl cholera (Pasteurella multocida) agent. Archiva Veterinaria 13:65-70.

Keywords: lymph node, sheep, cattle, mastitis, chicken

Notes: Intramammary injection of ewes and cattle with cultures of P.M. isolated from chickens, caused the subsequent development of signs of acute mastitis.

358. Dorobantu, R., L. Arvinti, A. Caprarin and S. Hrisanidi. 1975. Relationships between the electrophoretogram, some blood constants, and the histopathological picture in anticholeric vaccinated hens (Romanian/E). Lucrari Stiintific Institutul Agronomic "N. Balcescu", Bucuresti. Seria C 18/19:111-116.
Keywords: pathogenesis, vaccine, electrophoresis, serum protein, lymphocyte, cellular immunity, chicken, strain comparison, antibody

Notes: Vaccination of two groups of hens with two different strains of P.M. provided some hens in one group with protection, while all hens in the second group died. There were differences in lymphocyte counts and gamma globulin levels between the two groups.

359. Dorsey, T.A. 1963. Studies on fowl cholera. II. The correlation between biochemic classification and the serologic and immunologic nature of Pasteurella multocida strains. Avian Diseases 7(4):393-402.

Keywords: serology, serotyping, biochemical test, strain comparison, immunogenicity

Notes: Biochemical grouping was useful only as a means of roughly selecting strains as the correlation with serologic types was not complete.

360. Dorsey, T.A. 1963. Studies on fowl cholera. I. A biochemic study of avian Pasteurella multocida strains. Avian Diseases 7(4):386-392.

Keywords: biochemical test, strain comparison, serotyping

Notes: A biochemical classification of P.M. isolated from cases of avian cholera showed that the strains could be divided into three groups.

361. Dorsey, T.A. and G.S. Harshfield. 1959. Studies on fowl cholera. South Dakota Agricultural Experiment Station Technical Bulletin 23:1-18.

Keywords: torticollis, carrier, chicken, South Dakota, vaccine, agglutination, immunization, prevention, treatment, biochemical test, serotyping, serotype 1, oxytetracycline

Notes: Over 80% of the avian strains isolated in South Dakota between 1944 and 1959 were serotype 1. The whole-blood agglutination test was used to detect carriers, but some non-reactors were found to harbor P.M. in the upper respiratory tract.

362. Doubly, J.A. and C.I. Nelson. 1951. Some types of differential fermentation reactions of Pasteurella multocida. Proceedings of the North Dakota Academy of Sciences 5:30-32.

Keywords: biochemical test, strain comparison

Notes: Twelve cultures of P.M. were divided into six fermenting types based on their capacity to ferment d-xylose, l-arabinose and dulcitol.

363. Dougherty, E. 1953. The efficacy of several immunizing agents for the control of fowl cholera in the white pekin duck. Cornell Veterinarian 43:421-427.

Keywords: vaccine, immunization, duck, white pekin, chick embryo

Notes: An egg embryo vaccine protected a larger percentage of ducklings and gave them longer-lasting immunity than four commercial and two laboratory strains

364. Doutre, M.P., P. Perreau and M. Sane. 1975. Cats of Dakar urban center as buccal carriers of Pasteurella multocida (French/E). Revue d'Elevage et de Medicin Veterinaire des Pays Tropicaux 28(1):21-23.

Keywords: rat, cat, carrier, Gambian rat, black rat, Rattus rattus, Cricetomys gambianus, Africa, Senegal, host range, reservoir

Notes: P.M. was isolated from 25 of 69 cats, and from 5 of 23 black rats (Rattus rattus). No isolates were made from Gambian rats (Cricetomys gambianus).

365. Drzeniek, R., W. Scharmann and E. Balke. 1972. Neuraminidase and N-acetylneuraminate

pyruvate-lyase of Pasteurella multocida. Journal of General Microbiology 72:357-368.

Keywords: neuraminidase, N-acetylneuraminate, pyruvate lyase, pathology, P.haemolytica, enzyme, related bacteria

Notes: Neuraminidase was found in almost all strains of P.M. but not as often in P. haemolytica.

366. Dua, S.K. and C.C. Pandurangarao. 1978. Serological tests as indicators of immunity against Pasteurella multocida infection in sheep. Canadian Journal of Comparative Medicine 42(4):489-495.

Keywords: serology, hemagglutination, agar agglutination test, vaccine, ovine strain, sheep, immunity, goat, agglutination

Notes: A passive hemagglutination test predicted the fate of unvaccinated sheep by detecting the level of natural immunity while the agar agglutination test indicated the immune status of vaccinated sheep.

367. Dua, S.K. and S.K. Maheswaran. 1978. Studies on Pasteurella multocida. VI. Nature of systemic immunity and analysis of the correlation between levels of immunity induced by various fowl cholera vaccines and protection against challenge. Avian Diseases 22(4):748-764.

Keywords: vaccine, cellular immunity, humoral immunity, turkey, hemagglutination, antibody

Notes: By using the three avirulent strains of P.M. as vaccines, the nature of the systematic immunity (humoral and cell-mediated) induced against fowl cholera disease in turkeys was investigated. Both humoral and cell mediated immunity were important

368. Dua, S.K. and S.K. Maheswaran. 1978. Studies on Pasteurella multocida. VII. Dynamics and temporal development of local humoral immunity induced by a live avirulent fowl cholera vaccine. Avian Diseases 22(4):771-777.

Keywords: immunization, humoral immunity, turkey, fluorescent antibody test, adjuvant

Notes: As demonstrated by the indirect immunoflourescence technique, vaccination of turkeys by administering the Clemson University strain of P.M. in drinking water induced local antibodies in the tracheal secretions. None were induced by an oil-adjuvanted bacterin

369. Dua, S.K., C.C. Pandurangarao and S.S. Khera. 1977. Studies on the use of bovine haemorrhagic septicaemia vaccine in sheep and goats. Indian Veterinary Journal 54(4):421-424.

Keywords: bovine, hemorrhagic septicemia, vaccine, sheep, goat

Notes: A vaccine derived from a bovine strain was found to confer protection in sheep and goats against challenge with sheep strains of P.M.

370. Dubrov, I.S., G.D. Ishchenko and A.A. Matros. 1984. Effect of the fluid used for rehydrating freeze-dried live vaccines on the survival of microorganisms in aerosols (with reference to Pasteurella multocida) (Russian). Veterinariya (Moscow) 5:32-34.

Keywords: immunity, vaccine, prevention, lyophilization, aerosol, vaccine diluent, duck, goose, diluent

Notes: Laboratory experiments with a live Pasteurella aerosol vaccine for ducks and geese, using different diluents, showed that a combination of 10 percent sucrose and 10 percent glycerol for reconstituting the lyophilized vaccine secured the best bacterial survival rate.

371. Duclos, P., J. Freney, J. Caillet, H. Alexandre and D. Garonnat. 1986. Carbon source assimilation and fermentation tests: study of 77 animal Pasteurella strains by a microtechnique. Comparative Immunology, Microbiology and Infectious Diseases 9(1):47-51.

Keywords: carbon source, biochemical test, strain comparison, P.haemolytica, related bacteria

Notes: Typical profiles of carbon and carbohydrate utilization by strains of P.M. and P. haemolytica were determined using the API micro method.

372. Dwivedi, P.N. and S.S. Sodhi. 1987. Serotyping and in vitro drug sensitivity of Pasteurella multocida strains isolated from poultry. Indian Journal of Comparative Microbiology, Immunology and Infectious Diseases 8(1):15-18.

Keywords: antibiotic sensitivity, chicken, strain comparison

Notes: (ONS)

373. Dyakov, L. 1965. Pathomorphological examination of hens suffering from subacute and chronic cholera as well as of animals recovered from the disease, and of persistent carriers (German/E). Monatshefte fur Veterinarmedizin 21(10):382-388.

Keywords: chicken, pathology, carrier

Notes: The pathology that occurs in chickens with several clinical stages of avian cholera is described.

374. Dyakov, L. 1964. Pathomorphology of peracute and acute fowl cholera (German). Monatshefte fur Veterinarmedizin 19(21):814-818.

Keywords: chicken, pathology, review

Notes: The pathology of acute and chronic fowl cholera is presented.

375. Dziuk, H.E., G.H. Nelson, G.E. Duke, S.K. Maheswaran and M.S. Chi. 1978. Acquired resistance in turkey poults to Pasteurella multocida (P-1059 strain) during aflatoxin consumption. Poultry Science 57(5):1251-1254.

Keywords: vaccine, aflatoxin, turkey, diet, immunosuppression, immunization, immunity

Notes: The age of poults and method of vaccination were important factors in the development of acquired resistance to fowl cholera when aflatoxin was present in the diet.

376. Dzuvic, A., M. Ibrovic, M. Hadzimuratovic and Z. Zukancic. 1981. The study of etiopathogenesis of pasteurellosis in the farm-raised pheasant (Serbo-Croatian/E). Veterinaria (Sarajevo) 30(3/4):445-449.

Keywords: pheasant, mice, rodent, antibiotic, erythromycin, trimetosul, sanitation, treatment

Notes: Rodents were considered the source of infection of farmed pheasants. The infection was eliminated by antibiotic therapy, sanitation and extermination of rodents.

377. Elberg, S.S. and H. Cheng-Lee. 1950. Studies on dissociation in Pasteurella multocida. Journal of Comparative Pathology 60:41-54.

Keywords: dissociation, growth, mutation, virulence, colony morphology

Notes: A detailed summary of colonial dissociation characteristics within the "smooth flourescent" phase is presented. Virulence was correlated with the type of fluorescence but not the morphology of cultures

378. Eleazer, T.H. 1969. Cholera is the main topic. Turkey World January:19.

Keywords: general, turkey

Notes: A brief mention is made of avian cholera as a continuing problem in turkey farms.

379. ElGhani, M.A., W.A.G. ElSaid, A.A. Khalil and S. Gergis. 1978. "O" antigens of some Pasteurella multocida and their relation to immunogenicity. Journal of the Egyptian Veterinary Medical Association 38(4):35-44.

Keywords: strain comparison, immunogenicity, vaccine, capsular antigen, serotyping, duck, chicken

Notes: (ONS)

380. ElGhawas, A. 1980. Somatic and capsular typing of Pasteurella multocida isolated from domestic rabbits in Egypt. Journal of the Egyptian Veterinary Medical Association 40(1):23-27.

Keywords: rabbit, Egypt, strain comparison, duck, chicken, biochemical test

Notes: Biochemical and serological studies were done on 18 strains of P.M. isolated from rabbits.

381. Elias, B., P. Gergely, G. Boros and R. Varro. 1986. Epizootiological studies on porcine atrophic rhinitis. X. Study of the heat-labile exotoxin (HLT) of Pasteurella multocida in mice. Acta Veterinaria Hungarica 34(3-4):137-144.

Keywords: swine, Bordetella bronchiseptica, atrophic rhinitis, exotoxin, toxin, related bacteria

Notes: The effects exerted by the P.M. heat-labile exotoxin on the immune system and differential blood counts and its immunological relationship with the toxin of Bordetella bronchiseptica were studied.

382. ElNaasan, A.A., F.M. Hassanien and E.Y. Bashandy. 1977. Investigation on the germicidal activity of built-up litter extract. Journal of the Egyptian Veterinary Medical Association 36(1):22-27.

Keywords: survival, litter, environment, transmission

Notes: (ONS)

383. ElSaid, W.A.G., M.A. ElGhani, S. Gergis and A.A. ElGhawas. 1979. Evaluation of different adjuvanted vaccines in the control of avian pasteurellosis. Journal of the Egyptian Veterinary Medical Association 14(4):247-264.

Keywords: adjuvant, vaccine, immunization, antibody

Notes: Oil adjuvanted, sodium alginate-combined, formalinized and aluminum-precipitated vaccines were compared. The oil adjuvant and sodium alginate vaccines induced the highest levels of immunoglobulins and indirect hemagglutination titers.

384. Emerson, F.G., G.E. Kolb and F.A. VanNatta. 1983. Chronic cholera-like lesions caused by Moraxella osloensis. Avian Diseases 27(3):836-838.

Keywords: related bacteria, Moraxella osloensis, pathology, turkey, Wisconsin, sulfaquinoxaline, treatment, antibiotic

Notes: Cholera-like lesions appeared in four house-confined flocks of tom turkeys on one farm in Wisconsin in 1980. Moraxella osloensis was isolated and produced identical gross lesions when injected into normal turkeys.

385. Enescu, L., E. Olarian, A. Mardari and E. Belousov. 1971. Pharmacodynamics of antibiotics in experimental pasteurellosis (Romanian/E). Lucrari Stiintific II. Zootehnie-Medicina Veterinara 397-405.

Keywords: treatment, antibiotic, mice, methicillin, ampicillin, streptomycin, chloramphenicol

Notes: High doses of antibiotics (methicillin, ampicillin, streptomycin, chloramphenicol) were more effective than low doses in mice against P.M.

386. English, A.R., J.A. Retsema, V.A. Ray and J.E. Lynch. 1972. Carbencillin indanyl sodium, an orally active derivative of carbenicillin. Antimicrobial Agents and Chemotherapy 1(3):185-191.

Keywords: treatment, carbenicillin, antibiotic

Notes: Orally administered carbenicillin indanyl sodium protected mice against lethal infections of P.M.

387. Eremeev, G.S. and G.V. Shukov. 1966. On poultry pasteurellosis (Russian). Veterinariya (Moscow) 8:46-47.

Keywords: chicken, review, USSR

Notes: Pasteurellosis in poultry farms is briefly reviewed.

388. Erler, W., H. Feist, B. Jacob and W. Schade. 1986. The heptose region of the lipopolysaccharides of Pasteurella multocida. Journal of Basic Microbiology 26(7):383-387.

Keywords: lipopolysaccharide, structure, Salmonella, strain comparison

Notes: Lipopolysaccharide biosynthesis of P.M. appeared different from that of Salmonella spp. based on analysis of the heptose region.

389. Erler, W., H. Feist, K.D. Flossmann, H. Gunter, H. Hartmann and H.J. Kocher. 1981. More detailed characterization of lipopolysaccharides from Pasteurella multocida (German/E). Archiv fur Experimentelle Veterinarmedizin 35(2):291-297.

Keywords: lipopolysaccharide, biochemical test, Enterobacteriaceae, chemotype

Notes: The biological properties, sedimentation behavior and electron-optically visualized structures of lipopolysaccharides from P.M. were found to be identical to those from the Enterobacteriaceae.

390. Erler, W., K.D. Flossmann, H. Feist and B. Jacob. 1981. Structural elements of the lipopolysaccharides of Pasteurella multocida chemotype IV (German/E). Zeitschrift fur Allgemeine Mikrobiologie 21(8):569-579.

Keywords: lipopolysaccharide, antigenicity, immunization, genetic, structure

Notes: The genetic and serologic importance of the structural element of lipopolysaccharide from P.M. is discussed.

391. Erler, W. 1980. Lipopolysaccharides in Pasteurella multocida (German/E). Archiva Veterinaria 15:23-32.

Keywords: lipopolysaccharide, strain, chemotype, strain comparison

Notes: P.M. was differentiated into at least four chemotypes based on the composition of the lipopolysaccharide monosaccharide. There was no correlation between chemotype and serotype.

392. Erler, W., H. Feist and K.D. Flossmann. 1977. Linkage of fatty acids in lipid A of lipopolysaccharides from Pasteurella multocida (German/E). Archiv fur Experimentelle Veterinarmedizin 31(2):203-209.

Keywords: lipopolysaccharide, lipid A, fatty acid, structure, Enterobacteriaceae, taxonomy, chemotype

Notes: The linkages of fatty acids in lipid A of lipopolysaccharide from P.M. is described, showing that it resembles the structure of lipid A of the enterobacteria.

393. Erler, W., H. Feist, K.D. Flossmann and B. Jacob. 1977. Characterisation of lipopolysaccharides of some Pasteurella multocida strains (German/E). Archiv fur ExperimentelleVeterinarmedizin31(1):139-144.

Keywords: serotyping, structure, chemotype

Notes: Evidence is presented to support the theory that P.M. is sub-divided into four chemical types which were not equivalent with serotypes.

394. Eveleth, D.F., A.I. Goldsby and C.I. Nelson. 1949. Fowl cholera (Pasteurella multocida). Veterinary Medicine 64(2):73-78.

Keywords: review, control, prevention, treatment, antibiotic, vaccine

Notes: The results of an investigation into the most practical methods of decreasing losses due to fowl cholera are reported.

395. Evenshoshan, A., U. Bandheim, A. Michael, A. Geier, Y. Hartman and I. Malkinson. 1977. Means for the prevention of fowl cholera (Hebrew). Hassadeh 57(8):1487-1488.

Keywords: sanitation, treatment, control, prevention

Notes: The procedures for avoiding losses in poultry farms to pasteurellosis are briefly reviewed.

396. Ezhov, V.I. 1972. Effectiveness of the use of some antibiotics in pastuerellosis of fowls and turkeys (Russian). Trudy Vsesoyuznogo Instituta Eksperimental'noi Veterinarii 40:335-347.

Keywords: turkey, chicken, antibiotic resistance, chlortetracycline, antibiotic

Notes: This paper describes both laboratory studies and field trials of long-acting antibiotic preparations (benzathine chlortetracycline, benzathine dimethyltetracycline, distreptomidazol,bicillin-3, biovetin, biovit-40, chlortetracycline) that were given subcutaneously or orally in single or repeated doses to chickens and turkeys as prophylaxis against pasteurellosis.

397. Ezhov, V.I. 1968. Properties of Pasteurella organisms isolated from birds fed antibiotics for a long period (Russian). Veterinariya (Moscow) 12;65-66.

Keywords: antibiotic, isolation, antibiotic sensitivity

Notes: The isolation and characterization of several isolates of Pasteurella from birds are reported.

398. Ezhov, V.T. 1966. Influence of some antibiotics for training of postinfection immunity in pasteurellosis of ducks (Russian). Trudy Vsesoyuznogo Instituta Eksperimental'noi Veterinarii 32:118-122.

Keywords: duck, antibiotic, immunity, immunosuppression

Notes: (ONS)

399. Ezhov, V.T. 1966. Sensibility of causative agent of pasteurellosis for poultry to different antibiotics (Russian). Biulleten Vsesoyuznogo Instituta Eksperimental'noi Veterinarii 32:103-107.

Keywords: antibiotic, antibiotic sensitivity

Notes: The antibiotic sensitivity patterns for several isolates of P.M. made from poultry are described.

400. Ezhov, V.T. 1966. Comparative facts about effectivity of prophylactic and antibiotic therapy by different antibiotics for pasteurellosis of ducks (Russian). Trudy Vsesoyuznogo Instituta Eksperimental'noi Veterinarii 32:108-117.

Keywords: duck, antibiotic, treatment, prophylaxis

Notes: (ONS)

401. Faddoul, G.P., G.W. Fellows and J. Baird. 1967. Pasteurellosis in wild birds in Massachusetts. Avian Diseases 11(3):413-418.

Keywords: Quiscalus quiscula, Turdus migratorius, Sturnus vulgaris, Icteris galbula, Hesperiphona vespertina, Phasianus colchicus, Otus asio, grackle, robin, starling, Baltimore oriole, evening grosbeak, screech owl, case report, Massachusetts, wild bird, ringneck pheasant, host range

Notes: Thirteen cases of Pasteurella infection identified in the Massachusetts avifauna during a 2 1/2 year survey are reported.

402. Fadin, V. 1966. Aerosol method in treatment of fowl cholera with oxytetracyline (Russian). Sel'skokhozyaistvennaya Proizvod. Sibiri Dalnego Vostoka 1:38.

Keywords: treatment, oxytetracycline, chicken, aerosol, antibiotic

Notes: The delivery of oxytetracycline to chickens in an aerosol form is briefly discussed.

403. Fan, H.D. 1984. Serologic typing on somatic antigens of Pasteurella multocida strains isolated from birds and mammals (Bulgarian/E). Veterinarno-Meditsinski Nauki 21(3):36-40.

Keywords: somatic antigen, serotyping, strain comparison, antigen treatment, swine, cattle

Notes: A total of 61 percent of those strains isolated from birds belonged to somatic antigen groups 0:5 and 0:9, while as many as 62 percent of the strains isolated from swine were in groups 0:1 and 0:2, and 62 percent of those isolated from calves belonged to groups 0:2 and 0:9.

404. Faragher, J.T. and T.J. Harden. 1975. A comparison of commercial Mycoplasma gallisepticum antigens in the rapid serum agglutination test. Australian Veterinary Journal 51(12):566-569.

Keywords: vaccine, mycoplasma, agglutination, adjuvant, immunization, immunosuppression, mycotoxin, antibody, agglutinin, Mycoplasma gallisepticum

Notes: Weak serum agglutinin reactions to Mycoplasma gallisepticum were detected in two similar groups of chickens, neither infected with M. gallisepticum, but one of which was vaccinated at 12 and 17 weeks of age with killed P.M. oil-adjuvanted vaccine.

405. Farid, A.H., H.A. Torky, M.M. ElNimr, M. Akeula and M. Ezzat. 1987. Studies on Pasteurella multocida of birds. Second communication: colonial and biochemical characteristics in association with virulence to mice. Archiv fur Experimentelle Veterinarmedizin 41(2):197-201.

Keywords: mice, rabbit, turkey, chicken, biochemical test, virulence, colony morphology

Notes: A total of 150 P.M. strains were classified into four groups according to the fermentation of mannitol, maltose and arabinose. Six isolates exhibited abnormal fermentation reactions since they could not ferment glucose.

406. Farid, A.H., H.A. Torky, M.M. ElNimr, M. Akeula and M. Ezzat. 1987. Studies on Pastuerella multocida of birds. Third communication: serological typing of Pasteurella multocida strains isolated from chickens and turkeys. Archiv fur Experimentelle Veterinarmedizin 41(2):202-207.

Keywords: serotyping, ELISA, strain comparison, chicken, turkey, enzyme-linked immunosorbent assay, hemagglutination, agar gel immunodiffusion, agglutination

Notes: The classification of 150 isolates of P.M. into distinct serological groups by use of the enzyme-linked immunosorbent assay was better than serotyping by conventional methods.

407. Farid, A.H., H.A. Torky, M.M. ElNimr, M. Akeula and M. Ezzat. 1987. Studies on Pasteurella multocida of birds. Fourth communication: a new polyvalent oil-adjuvant vaccine. Archiv fur Experimentelle Veterinarmedizin 41(2):208-211.

Keywords: vaccine, immunization, chicken, turkey, serotype 20

Notes: A polyvalent oil adjuvanted vaccine containing serotype 20 gave higher protection than a classical field vaccine that lacked this strain.

408. Feist, H., W. Erler and K.D. Flossmann. 1983. Chemical characterization of important cell wall components of Pasteurella multocida (German/E). Archiv fur Experimentelle Veterinarmedizin 37(2):185-195.

Keywords: cell wall, peptidoglycan, lipid A, lipopolysaccharide, mannan, structure, immunity, antigen

Notes: The chemical characterization of the structures of the cell wall of P.M. is reported. The immunizing antigen was characterized as a complex compound of lipopolysaccharides, peptides and lipids.

409. Feist, H. 1981. Studies on the structure of peptidoglycan in Pasteurella multocida (German/E). Archiva Veterinaria 15:33-44.

Keywords: cell wall, structure, amino acid, peptidoglycan, gram-negative bacteria

Notes: The structure and amino acid sequence of the cell wall peptidoglycan was the same as for other gram-negative bacteria.

410. Feist, H., W. Erler and K.D. Flossmann. 1981. Structure of peptidoglycan on Pasteurella multocida (German/E). Archiv fur

Experimentelle Veterinarmedizin 35(5):781-789.

Keywords: peptidoglycan, cell wall, structure, amino acid, gram-negative bacteria

Notes: The characteristics of peptidoglycan isolated from P.M. is described as typical of gram-negative bacteria.

411. Fenstermacher, R. and B.S. Pomeroy. 1941. Encephalitis-like symptoms in turkeys associated with a *Pasteurella* sp. Cornell Veterinarian 31:295-301.

Keywords: turkey, virulence, strain comparison, rabbit, mice, pathogenesis, P.avicida

Notes: The finding of an atypical *Pasteurella* organism with a predilection for brain tissue of turkeys is reported.

412. Fierlinger, U., V. Ciocnitu and N. Manolescu. 1981. Isolation of a *Pasteurella multocida* bacteriophage (German/E). Archiv fur ExperimentelleVeterinarmedizin35(3):433-436.

Keywords: serotype A, serotype B, bacteriophage, ultrastructure, lysogeny, lysis

Notes: Phage B225 was isolated from only one of 84 P.M. strains.

413. Fierlinger, U., V. Ciocnitu and N. Manolescu. 1981. Presence of bacteriophage in *Pasteurella multocida* (German/E). Archiva Veterinaria 15:45-50.

Keywords: bacteriophage, sheep, lysogeny, lysis, ultrastructure

Notes: Bacteriophage 225 was isolated from a mink strain of P.M. The phage was icosahedral, not sensitive to chloroform or high temperature and was tentatively classified with Bradley Group B phages.

414. Figuerola, J.M.P. 1965. How to combat avian cholera (Spanish). Avicultura Tel. 16(2):56-58.

Keywords: chicken, review, prevention, control, treatment

Notes: The methods used to control losses due to avian cholera are very briefly reviewed.

415. Flickinger, E.L. and A.J. Krynitsky. 1987. Organochlorine residues in ducks on playa lakes of the Texas Panhandle and eastern New Mexico. Journal of Wildlife Diseases 23(1):165-168.

Keywords: Playa Lakes Region, Texas, duck, waterfowl, New Mexico, wild bird, organochlorine, contaminant, American widgeon, mallard, northern pintail, crow, green-winged teal, Corvus brachyrhynchos, Anas platyrhynchos, Anas acuta, Anas americana, Anas crecca

Notes: Analysis of contaminants in birds involved in an avian cholera die-off in the Playa Lakes region of Texas lead to the conclusion that contaminants probably did not contribute to the annual winter duck mortality in that area.

416. Floren, .U., B. Wiedeking, B. Kissel and E.F. Kaleta. 1987. *Pasteurella anatipestifer* infection of waterfowl (German/E). Deutsche Tieraerztliche Wochenschrift 94(9):525-534.

Keywords: P.anatipestifer, waterfowl, duck, goose, review, serotyping, pathology, culture, clinical sign, pekin

Notes: Avian cholera in waterfowl is reviewed. The taxonomic criteria of *P. anatipestifer* are given, including its morphology, isolation, culture requirements, serotyping and biochemical properties. Its role as a pathogen for pekin ducks is described.

417. Floren, .U., B. Wiedekin, B. Kissel and E.F. Kaleta. 1987. *Pasteurella anatipestifer* infection in waterfowl (German). Deutsche Tieraerztliche Wochenschrift 94(10):597-603.

Keywords: waterfowl, P.anatipestifer, wild bird, review, duck, goose

Notes: The clinical, epizootiological, host-range and other aspects of *P. anatipestifer* infections are reviewed.

418. Flossman, K.D., G. Muller and P. Heilmann. 1983. Effect of parenteral administration of iron on experimental infection of mice and swine with *Pasteurella multocida* (German/E). Archiv fur Experimentelle Veterinarmedizin 37(2):217-225.

Keywords: iron, mice, swine, pathogenesis, virulence

Notes: Parenteral administration of iron to mice and piglets resulted in higher mortality upon challenge with P.M.. The effect was dependent on the chemical nature of the iron compound used, dosage, mode, and timing of application, host animal, and bacterial strain. Mortality was most increased by low molecular weight iron compounds.

419. Flossmann, K.D., M.P. Heilmann, H. Rosner and G. Mueller. 1984. Influence of iron on *Pasteurella multocida* (German/E). Zentralblatt

fur Bakteriologie, Mikrobiologie und Hygiene Abteilung I Originale A 258(1):80-93.

Keywords: metabolism, iron, iron transport, siderophore

Notes: Neither enterobactin nor deferrioxamine B as typical representatives of phenolate or hydroxamate siderophores took part in iron transport in P.M.

420. Flossmann, K.D., H. Rosner, U. Grunke and N. Miosga. 1984. Decrease of virulence and immunogenicity of *Pasteurella multocida* by iron deficiency (German/E). Zeitschrift fur Allgemeine Mikrobiologie 24(4):231-237.

Keywords: mice, virulence, vaccine, immunity, medium, iron, culture

Notes: The virulence of P.M. for mice depended on the iron content of the cultivation medium. Frequent passages of bacteria on iron-deficient growth medium resulted in drastic decreases in virulence and, for one strain, immunogenicity was also lowered.

421. Flossmann, K.D. and G. Muller. 1980. Influence of iron on the virulence of *Pasteurella multocida* (German/E). Acta Biologica et Medica Germanica 39(2/3):327-334.

Keywords: siderophore, virulence, iron, mice, iron metabolism

Notes: Intraperitoneal administration of iron compounds after experimental infection of mice lead to a significant increase in virulence of P.M. strains.

422. Flossmann, K.D., H. Feist and W. Erler. 1980. Carbohydrate metabolism in *Pasteurella multocida* (German). Zeitschrift fur Allgemeine Mikrobiologie 20(9):553-561.

Keywords: taxonomy, classification, glucose metabolism, fermentation, biochemical test

Notes: Glucose metabolism and identification of end products were used in the taxonomy of P.M.

423. Flossmann, K.D., B. Rohrmann, H. Feist and W. Erler. 1979. Deoxyribonucleic acids from *Pasteurella multocida* and *Pasteurella haemolytica* (German/E). Archiv fur Experimentelle Veterinarmedizin 33(3):393-402.

Keywords: P.haemolytica, DNA, RNA, strain comparison, metabolism, taxonomy, related bacteria

Notes: *P. haemolytica* and P.M. strains contained between 1.5 and 3 percent phosphorus, between 9 and 14 percent nitrogen, between 2 and 4 percent DNA and between 5 and 18 percent RNA, depending on culturing conditions. The base value of *P. haemolytica* was between 37 and 38 percent GC, while the value for P.M. was between 41 and 48 percent.

424. Flossmann, K.D., B. Rohrmann, H. Feist, M. Hofer and W. Erler. 1977. Chemically defined and partially defined nutritive media from *Pasteurella multocida* and *Pasteurella haemolytica* (German/E). Archiv fur Experimentelle Veterinarmedizin 31(1):61-69.

Keywords: medium, growth, culture, isolation, metabolism, P.haemolytica, nutrition, related bacteria

Notes: Two recipes are given for defined and semi-defined culture media for P.M. and *P. haemolytica*. They were developed on the basis of studies on nutrient demand and the effects of complex nutritive substrates.

425. Flossmann, K.D., H. Feist and W. Erler. 1976. End products of glucose fermentation of *Pasteurella multocida* and *P. haemolytica* (German). Zeitschrift fur Allgemeine Mikrobiologie 16(4):259-262.

Keywords: biochemical test, glucose metabolism, fermentation, taxonomy, P.haemolytica, related bacteria

Notes: The end products of glucose fermentation of P.M. and *P. haemolytica* were compared.

426. Foged, N.T., K.B. Pedersen and F. Elling. 1987. Characterization and biological effects of the *Pasteurella multocida* toxin. Federation of European Microbiological Societies Microbiology Letters 43:45-51.

Keywords: rat, swine, endotoxin, toxin, atrophic rhinitis, pathology, pathogenesis, bone resorption, polyacrylamide gel electrophoresis, anion exchange chromatography, chromatography

Notes: A proteinaceous P.M. toxin was purified and shown to produce bone resorption when instilled into the nasal cavity of piglets and rats.

427. Fortin, M. and M. Jacques. 1987. Hemagglutination by *Pasteurella multocida* of porcine origin. Journal of Clinical Microbiology 25(5):938-939.

Keywords: hemagglutination, atrophic rhinitis, mannose, virulence, swine, strain comparison

Notes: Certain P.M. isolates from pigs with atrophic rhinitis possessed a mannose-sensitive hemagglutinin. Isolates from healthy pigs did not hemagglutinate.

428. Frances, B.K.T., H.F. Schels and G.R. Carter. 1980. Type E Pasteurella multocida associated with haemorrhagic septicaemia in Zambia. Veterinary Record 107:135.

Keywords: Zambia, hemorrhagic septicemia, serotype E, serotyping, cattle, strain comparison, Africa, case report

Notes: Serotype E was found in Zambia, extending the range of this serotype in Africa.

429. Francis, D.P., M.A. Holmes and G. Brandon. 1975. Pasteurella multocida - infections after domestic animal bites and scratches. Journal of the American Medical Association 233(1):42-45.

Keywords: transmission, penicillin, man, dog, cat, treatment, host range

Notes: P.M. is a common cause of infection following bites or scratches from dogs and cats, but it is seldom reported.

430. Frank, G.H. 1980. Serological groups among untypable bovine isolates of Pasteurella haemolytica. Journal of Clinical Microbiology 12(4):579-582.

Keywords: P.haemolytica, related bacteria, serotyping, cattle, hemagglutination, agglutination, strain comparison

Notes: Ten P. haemolytica isolates from the nasal passages of cattle, untypable by the indirect hemagglutination procedure, were grouped into three serotypes by the rapid plate agglutination test. The isolates belonged to three distinct serotypes and were not members of established serotypes that lack the specific soluble antigen that forms the basis of serotyping by indirect hemagglutination.

431. Frank, G.H. and G.E. Wessman. 1978. Rapid plate agglutination procedure for serotyping Pasteurella haemolytica. Journal of Clinical Microbiology 7(2):142-145.

Keywords: related bacteria, serotyping, agglutination, hemagglutination, strain comparison, P.haemolytica

Notes: A specific, rapid plate agglutination test serotyped P. haemolytica isolates without requiring special antigen preparation and gave the same results as the indirect hemagglutination test.

432. Frankowski, M. 1967. Epizootiologic problems of pasteurellosis in the Province of Warsaw from 1957 - 1961 (Polish/E). Polskie Archivum Weterynaryjne 10(3):493-506.

Keywords: case report, soil quality, soil permeability, cattle, swine, chicken, stress, weather, temperature, humidity

Notes: A close correlation was found between stressful weather and the number of outbreaks of cattle, pig and fowl pasteurellosis.

433. Frederiksen, W. 1973. Pasteurella taxonomy and nomenclature. Contributions to Microbiology and Immunology 2:170-176.

Keywords: Actinobacillus lignieresii, Actinobacillus equuli, Actinobacillus suis, P.pneumotropica, P.haemolytica, P.gallinarum, P.ureae, biochemical test, identification

Notes: Biochemical reaction tests were used for species separation criteria.

434. Friend, S.C.E., B.N. Wilkie, R.G. Thomson and D.A. Barnum. 1977. Bovine pneumonic pasteurellosis: experimental induction in vaccinated and nonvaccinated calves. Canadian Journal of Comparative Medicine 41(1):77-83.

Keywords: P.haemolytica, vaccine, immunization, aerosol, cattle, bovine pneumonic pasteurellosis

Notes: The immune response induced by combined aerosol and parental vaccination on lung lesions produced in calves by P. haemolytica A1 was studied.

435. Frost, B.M., M.E. Valiant and E.L. Dulaney. 1976. In vitro and in vivo activity of 3-(1 methyl-5-nitro-2-imidazolylmethlideneamino)-2-oxazolidinone against Pasteurella. Chemotherapy 22(5):324-330.

Keywords: antibiotic, furazolidone, nitroimidazole, sulfaquinoxaline, antibiotic sensitivity

Notes: A nitroimidazole was superior to furazolidone against Pasteurella infections in mice. It was also superior to furazolidone and sulfaquinalone against P.M. in chickens. However, furazolidone was more active against Pasteurella and Yersinia isolates.

436. Frost, B.M., M.E. Valiant, L. Benson and E.L. Dulaney. 1974. Activity of fosfomycin against Pasteurella. Avian Diseases 18(4):578-589.

Keywords: antibiotic, fosfomycin, chicken, antibiotic sensitivity, treatment, penicillin, oxytetracycline, streptomycin, novobiocin, prevention

Notes: In an avian cholera model infection, fosfomycin at 75 g and 100 g per ton of feed completely protected chickens against challenge by two P.M. isolants. Fatalities were significantly reduced in birds fed rations containing 50 g and 25 g of fosfomycin per ton.

437. Frymus, T., M.M. Wittenbrink and K. Petzoldt. 1986. Failure to demonstrate adherence of *Pasteurella multocida* involved in atrophic rhinitis to swine nasal epithelial cells. Journal of Veterinary Medicine, Series B 33:140-144.

Keywords: atrophic rhinitis, Bordetella bronchiseptica, swine, adherence, related bacteria

Notes: P.M. strains from healthy pigs and those with atrophic rhinitis showed very poor adherence to swine nasal epithelial cells and other cell types used, regardless of the conditions of their cultivation or modifications of adherence testing.

438. Fuentes, E.D., M. Pedroso, E. Alvarez and R. Barbera. 1986. Vaccine against pasteurellosis (*Pasteurella multocida* type A). II. Capsular fraction as immunogen (Spanish/E). Revista de Salud Animal 8(3):221-228.

Keywords: vaccine, capsular antigen, serotype A

Notes: (ONS)

439. Fuentes, E.D. and M. Quintana. 1984. Method for conserving virulent strains of *Pasteurella multocida* (Carter A) in laboratory conditions (Spanish/E). Revista de Salud Animal 6(2):323-328.

Keywords: virulence, storage, animal passage, serotype A, mice, cattle

Notes: Successive intraperitoneal passages in mice and intrapulmonary passages in calves elevated the virulence of a strain and permitted its storage in frozen mice liver for 10 months without loss of virulence.

440. Fuentes, M. and C. Pijoan. 1986. Phagocytosis and intracellular killing of *Pasteurella multocida* by porcine alveolar macrophages after infection with pseudorabies virus. Veterinary Immunology and Immunopathology 13(1/2):165-172.

Keywords: pathogenesis, swine, macrophage, cellular immunity, phagocytosis, pneumonia, pseudorabies virus

Notes: Infection with pseudorabies virus interfered with normal alveolar macrophage killing functions. This alteration of macrophage function may be a factor in the pathogenesis of pseudorabies virus, P.M.-mediated pneumonia in swine

441. Fujihara, Y., M. Onai, S. Koizumi, N. Satoh and T. Sowada. 1986. An outbreak of fowl cholera in wild ducks (*Rosybilled pochard*) in Japan. Japanese Journal of Veterinary Science 48(1):35-43.

Keywords: waterfowl, case report, Rosy-billed pochard, wild bird, host range

Notes: A first report is made of of avian cholera in wild waterfowl in Japan.

442. Fumarola, D., E. Jirillo, G. Miragliotta and E. Magliulo. 1982. Influence of lipopolysaccharide from *Pasteurella multocida* on fibroblasts cultured in vitro. IRCS Medical Science 10:647-648.

Keywords: lipopolysaccharide, fibroblast, cell culture, toxin, toxicity, mitotic index, endotoxin

Notes: The lipopolysaccharide from P.M. placed on chick embryo fibroblasts at high doses produced marked signs of cellular damage. At low doses the damage was reversable.

443. Gadberry, J.L., K. Clemmons and K. Drumm. 1980. Evaluation of methods to detect oxidase activity in the genus *Pasteurella*. Journal of Clinical Microbiology 12(2):220-225.

Keywords: biochemical test, taxonomy, identification, oxidase

Notes: Fresh one percent tetramethyl-p-phenylenediamine dihydrochloride was the reagent of choice for the detection of oxidase activity in the genus *Pasteurella*.

444. Gadberry, J.L. and N.G. Miller. 1978. Characterization of a *Pasteurella multocida* bacteriophage. American Journal of Veterinary Research 39(9):1565-1566.

Keywords: bacteriophage, characterization, lysogeny, lysis

Notes: Temperature, morphology and irradiation studies on a bacteriophage B932a are reported.

445. Gadberry, J.L. and N.G. Miller. 1977. Use of bacteriophages as an adjunct in the identification of *Pasteurella multocida*. American Journal of Veterinary Research 38(1):129-130.

Keywords: identification, bacteriophage, biochemical test

Notes: Rapid and definitive identification of 52.4 percent of 61 P.M. isolates was made using bacteriophages.

446. Gadzhiev, K.S. and A.G. Khalilov. 1980. Resistance of chicks to pasteurellosis (Russian). Veterinariya (Moscow) 4:36.

Keywords: resistance, chicken

Notes: A short report is given on host resistance of chicks to avian cholera.

447. Galabov, S., I. Kujumgiev, P. Nikolov, N. Spassova, T. Sumerska and M. Kashukeeva. 1966. Studies on the bacteria of the genus Pasteurella in view of their variability. IV. Influence with ultrasound waves on Pasteurella avicida (Bulgarian/E). Izvestiya na Mikrobiologicheskiya Institut, Bulgarska Akademiya na Naukite 18:85-98.

Keywords: ultrasound, mutant, colony morphology, antigenicity, virulence, biochemical test, P. avicida

Notes: Ultrasound treatment of P. avicida suspensions resulted in mutants that had changed in their morphology, biochemical behavior, antigenic structure and virulence.

448. Gallaghar, B. 1917. Fowl cholera and other hemorrhagic septicemia immunization experiments. Journal of the American Veterinary Medical Association 50(6):708-728.

Keywords: immunization, vaccine, chicken, rabbit, guinea pig

Notes: No noticeable resistance was conferred to fowls by the use of killed P.M. cells as immunizing agents. Live avian cholera strain 52 conferred a marked but not absolute resistance to a highly virulent strain of avian cholera bacillus

449. Gamil, A.G. 1971. Studies on the immunological properties of antihaemorrhagic septicemia hyperimmune sera and its specific glohulin fractions. United Arab Republic Journal of Veterinary Science 8(1):31-36.

Keywords: serotype 1, hemorrhagic septicemia, mice, cattle, passive immunity, globulin fraction

Notes: Passive immunization of mice with gamma globulin fractions gave protection to challenge with P.M. type 1 for 14 days, compared to 6 to 8 days when the hyperimmune serum from which the fractions were derived was used. The fractions retained their protective activity for years longer than the serum.

450. Ganfield, D.J., P.A. Rebers and K.L. Heddleston. 1976. Immunogenic and toxic properties of a purified lipopolysaccharide-protein complex from Pasteurella multocida. Infection and Immunity 14(4):990-999.

Keywords: immunity, immunization, prevention, vaccine, lipopolysaccharide, toxin

Notes: An immunogenic component of the lipopolysaccharide-protein complex from P.M. induced up to 80 percent protection in mice from challenge.

451. Ganiere, J.P., J. Brocas, M. Prudhomme and D. Villate. 1983. Investigations showing up an infection of ducks and geese by Pasteurella anatipestifer in France (French/E). Revue de Medicine Veterinaire 134(12):713-717.

Keywords: duck, goose, related bacteria, P.anatipestifer, France, case report

Notes: Examinations of dead ducklings and goslings with serious lesions allowed the identification of 12 cases of P. anatipestifer infection.

452. Garg, R.C. and O.P. Gautam. 1972. Evaluation of terephthalic acid for chlortetracycline potentiation against experimental fowl cholera. Indian Journal of Poultry Science 7(4):14-19.

Keywords: treatment, antibiotic, chlortetracycline, terephthalic acid, chicken

Notes: The potentiation of chlortetracycline with terephthalic acid was evaluated against experimental avian cholera in young birds. The severity of the disease was reduced and there was no effect on the growth rate.

453. Garlinghouse, L.E.Jr., R.F. DiGiacomo, G.L.Jr. Van Hoosier and J. Condon. 1981. Selective media for Pasteurella multocida and Bordetella bronchiseptica. Laboratory Animal Science 31(1):39-42.

Keywords: isolation, clindamycin, rabbit, medium, Bordetella bronchiseptica, culture, related bacteria, selective medium

Notes: Media prepared by incorporating clindamycin into blood agar reduced time and materials required to identify and isolate P.M.

454. Gaunt, G., R. Moffat and T.K.S. Mukkur. 1977. Fowl cholera: immunization of chickens with

potassium thiocyanate (KSCN) extract of Pasteurella multocida serotype 3. Avian Diseases 21(4):543-548.

Keywords: vaccine, potassium thiocyanate, antigen, serotyping, immunity, strain comparison, serotype 1, serotype 3, agar gel immunodiffusion, antigen extraction

Notes: A potassium thiocyanate extract of P.M. serotype 3 was immunogenic against homologous and one heterologous strain (serotype 1). The two heterologous serotypes were found to share two antigenic determinants.

455. Geneidy, A.A., O. Lotfy, E. Nafel and K. Abbassy. 1971. Control of fowl and duck cholera with special reference to emulsified killed vaccines. Journal of the Egyptian Veterinary Medical Association 31(No.1/2):21-27.

Keywords: vaccine, immunity, duck, chicken, adjuvant, duration of immunity

Notes: Emulsified, killed vaccines were safe for ducks and chickens and were more effective than killed vaccines because their protection lasted for 12 months. Also, vaccination with live vaccines was needed only once a year.

456. Gentry, M.J., R.E. Corstvet and R.J. Panciera. 1982. Extraction of capsular material from Pasteurella haemolytica. American Journal of Veterinary Research 43(11):2070-2073.

Keywords: antigen, capsular antigen, P.haemolytica, related bacteria, antigen extraction

Notes: Capsular material was removed from early logarithmic phase P. haemolytica cells in a saline solution with little decrease in viability.

457. Gerlach, H. 1986. Biochemical differentiation of species of the family Pasteurellaceae isolated from birds (German/E). Deutsche Veterinaermedizinische Gesellschaft 238-248.

Keywords: biochemical test, DNA, DNA hybridization

Notes: (ONS)

458. Gershman, M., J.F. Witter, H.E.Jr. Spencer and A. Kalvaitis. 1964. Case report: Epizootic of fowl cholera in the common eider duck. Journal of Wildlife Management 28(3):587-589.

Keywords: case report, eider, island, Maine, control, wild bird, host range, waterfowl

Notes: An outbreak of avian cholera caused the loss of 200 birds on islands off the Maine coast.

459. Gevedze, V.I., N.S. Koshaleva, E.I. Vaisman, A.E. Khrutski and R.R. Kasyan. 1985. Properties of Pasteurella multocida strains from various species of mammals and birds (Byelorussian/E). Vestik Akademii Navuk SSSR, Seryya Sel'skagaspadarchykh Navuk 1:118-121.

Keywords: strain comparison, mammal, virulence, colony morphology, chicken

Notes: An analysis of the morphological, cultural and pathogenic characteristics of 260 isolates from mammals and birds.

460. Gevedze, V.I. and E.I. Vaisman. 1978. Sources of Pasteurella infection for farm animals and their elimination (Russian). Dostizheniya Veterinarnoi Nauki i Peredovogo Opyta - Zhivotnovodstvu 4:44-46.

Keywords: control, source, transmission, chicken, swine, cattle

Notes: The source of infection of farm animals and the control of pasteurellosis is discussed.

461. Ghazikhanian, G.Y., W.M. Dungan and B.J. Kelly. 1983. Immunization of turkey breeder hens against fowl cholera by combined oral and wing-web administration of attenuated (CU) Pasteurella multocida. Avian Diseases 27(1):133-140.

Keywords: immunity, vaccine, turkey

Notes: A combination of oral and wing-web vaccination of turkeys with attenuated P.M. provided protection with few adverse effects.

462. Giambrone, J.J., U.L. Diener, N.D. Davis, V.S. Panangala and F.J. Hoerr. 1985. Effect of purified aflatoxin on turkeys. Poultry Science 64(5):859-865.

Keywords: aflatoxin, immunization, immunosuppression, immunotoxicity, turkey

Notes: Purified aflatoxin had no effect on humoral immunity or on development of aquired immunity to Newcastle disease or avian cholera vaccination.

463. Giambrone, J.J., U.L. Diener, N.D. Davis, V.S. Panangala and F.J. Hoerr. 1985. Effects of aflatoxin on young turkeys and broiler chickens. Poultry Science 64(9):1678-1684.

Keywords: aflatoxin, turkey, chicken, immunization, immunotoxicity, humoral immunity, immunosuppression

Notes: Neither humoral immunity nor development of aquired immunity to Newcastle disease or avian cholera vaccination was decreased in turkeys or broilers given crude aflatoxin.

464. Giambrone, J.J., U.L. Diener, N.D. Davis, V.S. Panangala and F.J. Hoerr. 1985. Effects of purified aflatoxin on broiler chickens. Poultry Science 64(5):852-858.

Keywords: aflatoxin, immunization, immunosuppression, immunotoxicity, chicken

Notes: Aflatoxin had no effect on humoral immunity or on the development of immunity to Newcastle disease or fowl cholera by vaccination.

465. Giambrone, J.J. 1984. Vaccination techniques, programs for broilers and broiler breeders. Poultry Digest 43(504):54-58.

Keywords: vaccine, immunization, chicken, review

Notes: Information is given on the different techniques of vaccination against diseases of poultry including avian cholera.

466. Gilbride, K.A. and S. Rosendal. 1983. Evaluation of a selective medium for isolation of Haemophilus pleuropneumoniae. Comparative Medicine 47:445-450.

Keywords: selective medium, Haemophilus pleuropneumoniae, isolation, medium, culture, related bacteria, spectinomycin, crystal violet, lincomycin, bacitracin

Notes: Crystal violet, lincomycin, bacitracin, and spectinomycin were evaluated as selective agents in media for the isolation of Haemophilus pleuropneumoniae. No single agent or combination of two or more inhibited all non-Haemophilus strains, including P.M.

467. Gilchrist, P. 1963. A survey of avian respiratory diseases. Australian Veterinary Journal 39:140-144.

Keywords: chicken, respiratory disease, mycoplasma, virus

Notes: The techniques used in isolating agents involved in cases of avian respiratory diseases are described. P.M. was among the causative agents involved in cases of avian respiratory disease.

468. Ginzburg, V.V. 1975. Differentiation of staphylococci isolated from fowls (Russian). Veterinariya (Moscow) 8:32-34.

Keywords: mannite, virulence, chicken, Staphylococcus aureus, hyaluronidase

Notes: The virulence of 89 strains of avian staphylococci was studied by inoculating them into the orbit or subcutaneously in chicks 1, 2, 7 or 14 days old. Staphylococcus aureus was responsible for a disease resembling chronic pasteurellosis, with swelling of limb joints and of the face.

469. Girard, A.E., W.U. Schelkly, K.T. Murphy and P.S. Sawyer. 1987. Activity of B-lactamase inhibitor sulbactam plus ampicillin against animal isolates of Pasteurella, Haemophilus, and Staphylococcus. American Journal of Veterinary Research 48(12):1678-1683.

Keywords: beta-lactamase, related bacteria, Haemophilus, staphylococcus, antibiotic, treatment, antibiotic sensitivity, sulbactam, ampicillin, beta-lactam antibiotic

Notes: The combination of sodium sulbactam, a beta-lactamase inhibitor, and ampicillin had a synergistic effect against all ampicillin-resistant pathogens, rendering them susceptible to ampicillin. Inhibitory concentrations of sulbactam-ampicillin were bactericidal.

470. Glisson, J.R., J.F. Dawe and S.H. Kleven. 1984. The effect of oil-emulsion vaccines on the occurrence of nonspecific plate agglutination reactions for Mycoplasma gallisepticum and M. synoviae. Avian Diseases 28(2):397-405.

Keywords: adjuvant, vaccine, mycoplasma, agglutination, Mycoplasma synoviae, immunosuppression

Notes: Pullets were vaccinated with one of several vaccines, including one for P.M. Plate agglutination tests for mycoplasma were done eight weeks later with variable reaction results.

471. Glorioso, J.C., G.W. Jones, H.G. Rush, L.J. Pentler, C.A. DaRif and J.E. Coward. 1982. Adhesion of type A Pasteurella multocida to rabbit pharyngeal cells and its possible role in rabbit respiratory tract infections. Infection and Immunity 35(3):1103-1109.

Keywords: adherence, serotype A, rabbit, cell culture, pathogenesis, serotype B, serotype D, serotype E, fimbriae

Notes: P.M. serotype A specifically attached to squamous epithelial cells of the rabbit pharyngeal mucosa both in vivo and in vitro and to some tissue culture cell lines such as

HeLa. All strains with serotype A capsules were adhesive. Strains with capsular serotypes B,D, and E were ten-fold less adhesive with the exception of one serotype D strain. Fimbriae were involved in attachment. Attachment could be inhibited by N-acetyl-D-glucosamine.

472. Glukhov, V.F. and V.G. Novikov. 1975. Reproduction of the pathogen of poultry pasteurellosis in the body of Argas persicus (Russian). Nauchnye Trudy Stavropol'skii Sel'skokhozyaistvennyi Institut 5(38):47-50.

Keywords: vector, Argas persicus, chicken, tick

Notes: The tick supported a thousand-fold increase in the numbers of P.M. cells in about 24 hours after infection.

473. Glunder, G., K.H. Hinz, U. Lohren and E.F. Kaleta. 1982. Torticollis in fowls caused by Pasteurella multocida (German/E). Deutsche Tieraerztliche Wochenschrift 89(1):34-36.

Keywords: torticollis, chronic infection, isolation, pathogenesis, chicken, carrier

Notes: Torticollis, with an exudative inflammation of the middle ear producing disequilibrium, occurred in adult chickens chronically infected with P.M.

474. Gogoasa, V., L. Taga, P. Mitroiu, S. Danciu and V. Minciuna. 1961. The concentration of vitamin A in the livers of hens from enzootic areas of avian cholera (Romanian). Lucrarile Stiintifice ale Institutului Patologie si Igiena Animala 2:233-241.

Keywords: chicken, vitamin A, pathogenesis

Notes: The range of vitamin A concentrations in the livers of chickens with and without avian cholera is reported.

475. Golebiowski, S. 1971. Behavior of some immunological indices of normal bovine serum and after immunization with Pasteurella multocida. Bulletin of the Veterinary Institute in Pulawy 15(1/2):1-13.

Keywords: immunization, serology, vaccine, cattle

Notes: The degree of natural immunity of a cattle herd against P.M. infection, and an evaluation of the effectiveness of vaccines against bovine pasteurellosis is reported.

476. Golota, Y.A., G.P. Borodai and S.K. Bzhezhinsky. 1965. The role of antibiotics in immunogenesis (Russian/E). Antibiotiki 10(4):341-344.

Keywords: immunosuppression, antibiotic, oxytetracycline, chlortetracycline, treatment, vaccine, antibody

Notes: The use of oxytetracycline in therapeutic doses markedly stimulated the production of alpha and gamma globulins when mixed with the vaccine.

477. Golubnichii, V.P. and R.D. Shusterman. 1978. Antigen interaction upon simultaneous immunization of fowls against Pasteurella multocida and Newcastle disease virus (Russian). Dostizheniya Veterinarnoi Nauki i Peredovogo Opyta - Zhivotnovodstvu 4:42-44.

Keywords: vaccine, immunization, chicken, combined vaccine, antigen, Newcastle disease virus

Notes: The antigenic competition of a combined vaccine is presented.

478. Golubnichii, V.P. and R.D. Shusterman. 1976. Protective effect of serum and tissue extracts of fowls immunized simultaneously against Newcastle disease and pasteurellosis (Russian). Trudy, Belorusskii Nauchno-Issledovatel'skii Institut Eksperimental'noi Veterinarii, Minsk 14:103-105.

Keywords: immunization, vaccine, chicken, Newcastle disease virus, combined vaccine

Notes: (ONS)

479. Golubnichii, V.P. and R.D. Shusterman. 1976. Effect of emulsified vaccines against pasteurellosis on the survival and immunogenicity of lentogenic Newcastle disease virus (in a combined vaccine) (Russian). Trudy, Belorusskii Nauchno-Issledovatel'skii Institut Eksperimental'noi Veterinarii, Minsk 14:90-94.

Keywords: vaccine, immunization, Newcastle disease virus, combined vaccine

Notes: (ONS)

480. Golubnichii, V.P. and R.D. Shusterman. 1975. Simultaneous immunization of fowls against pasteurellosis and Newcastle disease: laboratory and field trials (Russian). Trudy, Belorusskii Nauchno-Issledovatel'skii Institut Eksperimental'noi Veterinarii, Minsk 13:74-78.

Keywords: immunization, vaccine, chicken, combined vaccine

Notes: Simultaneous vaccination of fowl against pasteurellosis and Newcastle disease by aerosol, nasal, and intramuscular methods was highly effective.

481. Golubnichii, V.P. and V.P. Shusterman. 1974. I. Non-specific immunobiological reactivity of fowls upon simultaneous immunization against pasteurellosis and Newcastle disease. II. Efficacy and safety of simultaneous immunization against pasteurellosis and Newcastle disease (Russian). Trudy, BelorusskiiNauchno-Issledovatel'skiiInstitut Eksperimental'noiVeterinarii, Minsk 12:79-85.

Keywords: immunity, antibody, vaccine, phagocytosis, immunosuppression, serum protein, Newcastle disease virus

Notes: Immunization with mixture of live, avirulent pasteurellosis vaccine and B1 strain of Newcastle Disease virus produced an increase in phagocytic activity of leucocytes and in total blood proteins and blood protein fractions.

482. Gotz, V.P. 1974. Comparative charactistic of biological properties of Pasteurella isolated from rabbits, pigs and chickens (Russian/E). Mikrobiologicheskii Zhurnal (Kiev) 36(5):607-611.

Keywords: strain comparison, chicken, rabbit, ultrastructure, serologic comparison, colony morphology

Notes: Isolates from pigs and chickens differed in their ultrastructure and colonial morphology from isolates from rabbits. Immune serum prepared against isolates from rabbit did not agglutinate isolates from chickens and pigs and vice versa.

483. Grabarski, J. 1976. Determination of the therapeutic index of chlorinated sulfadimethoxine (Polish/E). Zeszyty Naukowe Akademii Rolniczo-Technicznej w Olsztynie 6:49-55.

Keywords: treatment, antibiotic, sulfadimethoxine

Notes: The therapeutic index for chlorinated sulfamethoxine was 1176, based on LD_{50} of 6,000 mg/kg body weight and an ED_{50} of 5.1 mg/kg body weight.

484. Grabarski, J. 1976. Chlorinated sulfadimethoxine as a new sulfonamide in treatment of experimental pasteurellosis in chicken (Polish/E). Zeszyty Naukowe Akademii Rolniczo-Technicznej w Olsztynie 7:51-59.

Keywords: chicken, sulfadimethoxine, antibiotic, treatment, carrier

Notes: Single daily doses of 50 to 150 mg/kg chlorinated sulfadimethoxine, given for seven days, protected chickens from infection with P.M. and prevented the establishment of the carrier state, provided the drug was not given past six hours post-infection.

485. Grabarski, J., K. Kalinowski and B. Hutnikiewicz. 1975. Experimental use of new halogenated sulphonamides in pasteurellosis in fowls (Polish). Medycyna Weterynaryjna 31(6):362-364.

Keywords: sulfonamide, treatment, antibiotic, chicken, Poland

Notes: The use of halogenated sulfonamides on Polish chicken farms is reported.

486. Greer, C.N. and P.E. Shewen. 1986. Automated colorimetric assay for the detection of Pasteurella haemolytica leucotoxin. Veterinary Microbiology 12:33-42.

Keywords: leucotoxin, related bacteria, toxin, P.haemolytica, antibody, humoral immunity, serology, detection

Notes: A colorimetric assay for the detection of P. haemolytica leucotoxin used the lysis of a bovine lymphoid cell line. Survival of cells was detected by the solubilization of the cells, releasing neutral red, which was measured with an automated spectrophotometer. The assay could also be used for the determination of neutralizing antibody.

487. Gregg, D.A., L.D. Olson and E.L. McCune. 1974. Experimental transmission of Pasteurella multocida from raccoons to turkeys via bite wounds. Avian Diseases 18(4):559-564.

Keywords: transmission, bite, turkey, raccoon, reservoir

Notes: The transmission of avian cholera followed bite wounds in the head and neck of susceptible turkeys by raccoons infected experimentally with P.M.

488. Griffiths, E. 1974. Rapid degradation of ribosomal RNA in Pasteurella septica induced by specific antiserum. Biochimica et Biophysica Acta 340:400-412.

Keywords: related bacteria, RNA, antibody, transferrin, complement, metabolism, oxidative phosphorylation, ribosome

Notes: Antibody, transferrin and complement, acting together, directly interfered with the biochemistry of P. septica, inhibiting RNA accumulation and stopping bacterial growth.

489. Griffiths, E. 1974. Metabolically controlled killing of *Pasteurella septica* by antibody and complement. Biochimica et Biophysica Acta 362:598-601.

Keywords: related bacteria, antibody, complement, metabolism, RNA, oxidative phosphorylation, P.septica

Notes: Uncouplers and inhibitors of oxidative phosphorylation protected *P. septica* against inactivation by antibody and complement.

490. Grimes, T.M. and L.E. Rosenfield. 1972. *Pasteurella anatipestifer* infection in ducks in Australia. Australian Veterinary Journal 48(6):367-368.

Keywords: related bacteria, case report, duck, Australia, P.anatipestifer

Notes: The first report of this organism in Australia outside Tasmania suggested it could be a cause of disease outbreaks on Australian duck farms.

491. Grimshaw, W.T.R., P.J. Colman and A.J. Weatherley. 1987. The efficacy of sulbactam-ampicillin in the therapy of respiratory disease associated with ampicillin resistant *Pasteurella* species in housed calves. Veterinary Record 121(17):393-396.

Keywords: ampicillin, swine, antibiotic resistance, treatment, sulbactam-ampicillin, cattle, sulbactam

Notes: Sulbactam-ampicillin was superior to ampicillin alone in the treatment of calf respiratory disease caused by ampicillin-resistant strains of *P. haemolytica* and P.M., an effect explained by the inhibitory effect of sulbactam on beta-lactamases produced by resistant bacteria.

492. Gritman, R.B. and W.I. Jensen. 1965. Avian cholera in a trumpeter swan (*Olor buccinator*). Bulletin of the Wildlife Disease Association 1(4):54-55.

Keywords: case report, trumpeter swan, Olor buccinator, Montana, wild bird, host range, waterfowl, swan

Notes: P.M. was diagnosed in a trumpeter swan by gross examination of the carcass and by isolation of the organism.

493. Groom, S.C., M.J. Hazlett and P.B. Little. 1986. An evaluation of the API ZYM system as a means of identifying *Haemophilus somnus* and related taxa. Canadian Journal of Veterinary Research 50(2):238-244.

Keywords: Haemophilus somnus, cattle, related bacteria, enzyme, biochemical test, identification

Notes: The API ZYM microbiological identification system allowed rapid identification of *Haemophilus somnus*, which was easily differentiated from P.M. and other similar bacteria.

494. Grumbles, L.C. 1969. Assault continues against bluecomb, cholera & mycoplasma. Turkey World January:18.

Keywords: mycoplasma, general, turkey

Notes: A brief progress report includes avian cholera.

495. Gualandi, G. 1953. Control of fowl cholera by addition of terramycin to the food (Italian/E). Archivo Veterinario Italiano 4:539-543.

Keywords: treatment, terramycin, antibiotic, prevention, chicken

Notes: After chickens had been given terramycin for 24 hours they were resistant to infection.

496. Guillausseau, P.J., G. Paul, R. Caquet, M. Detilleux and C. Laroche. 1976. Evolution inhabituelle d'une pasteurellose humaine apres morsure de chat (French). Nouvelle Presse Medicale 5:1579-1581.

Keywords: bite, cat, human, man

Notes: (ONS)

497. Guillion, G.W. 1952. Some diseases and parasites of American coots. California Fish and Game 38(1):421-423.

Keywords: case report, general, host range, waterfowl, wild bird, American coot, California, San Francisco Bay, duck

Notes: Coots were the most susceptible waterfowl species in an avian cholera die-off in San Francisco Bay in 1949.

498. Guittet, M., G. Bennejean, J.P. Picault and V. Marius. 1984. Avian vaccines against respiratory diseases (French). Recueil de Medecine Veterinaire 160(11):1085-1096.

Keywords: vaccine, immunization, review, respiratory disease

Notes: A general review is presented of avian vaccines, including those for P.M.

499. Gulubov, S., I. Kuyumdzhiev, P. Nikolov, N. Spasova, T. Sumerska and M. Kashukeeva. 1966. Studies of the bacteria of the genus Pasteurella in view of their variability. IV. Influence of ultrasound waves on Pasteurella avicida (Bulgarian). Izvestiya na Mikrobiologicheskiya Institut, Bulgarska Akademiya na Naukite 18:85-98.

Keywords: strain comparison, P.avicida, ultrasound

Notes: (ONS)

500. Guo, D.H., M. Zheng and S.N. Pan. 1980. Serological identification of capsular antigens of Pasteurella multocida in China (Chinese/E). Collected Papers of Veterinary Research 6:25-36.

Keywords: hemagglutination, China, capsular antigen, serology, cattle, swine, sheep, mink, rabbit, chicken, strain comparison

Notes: Carter's indirect hemagglutination test was used to serologically identify 62 cultures of P.M. from various animal and fowl species in China.

501. Gupta, B.K. and S. Kumar. 1978. Serotyping of Indian isolates of Pasteurella multocida from poultry. Indian Journal of Animal Sciences 48(4):301-304.

Keywords: chicken, strain comparison, cattle, classification, capsular antigen, somatic antigen

Notes: P.M. isolates from poultry were serotyped for capsular and somatic antigens.

502. Gupta, K.C. and A.N. Sawhney. 1972. Porcine pasteurellosis. II. Morphological, biochemical and serological characterization of Pasteurella multocida strains of porcine origin. Jawaharlal Nehru Krishi Vishwa Vidyalaya Research Journal 6(2):132-136.

Keywords: strain comparison, urease, biochemical test, mice, pigeon, swine, carrier, colony morphology

Notes: A total of 26 isolates of P.M. from pigs were studied for their morphological, biochemical and serological characteristics.

503. Gurleva, G.G., I.V. Domaradskii, E.E. Khalyapina, I.M. Alutin, V.N. Taranova, N.P. Pushnitsa, E.G. Koltsova, V.I. Marchenkov, N.M. Scheglakova and E.G. Grigoryan. 1971. Biological properties of Pasteurellae isolated from various species of animals (Russian/E). Zhurnal Mikrobiologii, Epidemiologii I Immunobiologii 48(11):54-58.

Keywords: strain comparison, strain, colicin, mice, rat, pigeon, biochemical test, DNA, virulence, antibiotic sensitivity, antibiotic

Notes: All strains of Pasteurella isolated from animals from various locations were determined to be P.M. by staining, cultural, biochemical and morphological characteristics, as well as by antibiotic sensitivity, DNA composition and virulence for mice, rats, and pigeons.

504. Gurumurthy, V. 1962. Some observations on fowl cholera in Andhra Pradesh. Indian Veterinary Journal 39(8):438-442.

Keywords: chicken, duck, immunization, carrier, case report, vaccine, Andhra Pradesh, India, control, disinfection

Notes: Killing birds affected with avian cholera and all those in contact with them was recommended to control the disease. Thorough cleansing and disinfection procedures and vaccination were also suggested.

505. Hadley, P.B. 1919. Studies on fowl cholera. VI. Immunization against Bacillus avisepticus by means of inoculations with killed cultures of virulent and avirulent strains. Rhode Island Agricultural Experiment Station Bulletin 179:4-15.

Keywords: virulence, immunization, vaccine, Bacillus avisepticus, chicken

Notes: Protection of chickens against Bacillus avisepticus infection was higher when they were vaccinated subcutaneously with a virulent strain than when an intraperitoneal route or an avirulent strain was used.

506. Hadley, P.B. 1914. Studies on fowl cholera. IV. The reciprocal relations of virulent and avirulent cultures in active immunization. Rhode Island Agricultural Experiment Station Bulletin 159:383-403.

Keywords: virulence, vaccine, immunization, rabbit

Notes: Complete control over infection was obtained in rabbits for the first time by vaccination

507. Hadley, P.B. 1914. Studies on fowl cholera. III. The inheritance in rabbits of immunity to the bacterium of fowl cholera. Rhode Island Agricultural Experiment Station Bulletin 157:285-307.

Keywords: immunity, rabbit, vaccine, passive immunity

Notes: Immunized female rabbits transmited to their offspring a high degree of temporary resistance to virulent challenge.

508. Hadley, P.B. 1912. Studies on fowl cholera. II. The role of a homologous culture of slight virulence in the production of active immunity in rabbits. Rhode Island Agricultural Experiment Station Bulletin 150:81-161.

Keywords: immunization, strain comparison, vaccine, immunity, rabbit

Notes: The nature and behavior of active immunity to a highly virulent strain of P.M. produced by subcutaneous inoculation with a nearly avirulent homologous culture is reported.

509. Hadley, P.B. and E.E. Amison. 1911. A biological study of eleven pathogenic organisms from cholera-like diseases in domestic fowls. Rhode Island Agricultural Experiment Station Bulletin 146:43-102.

Keywords: review, case report, chicken

Notes: This study reports the prevalence of avian cholera and similar diseases. Characteristics of the causative organisms are discussed.

510. Hadley, P.B. 1911. The use of carbolic acid in fowl cholera. Zentralblatt fur Bakteriologie, Parasitekunde und Infektionskrankheiten. 57(5):457-462.

Keywords: prevention, carbolic acid, sanitation, disinfection, related bacteria, Bacillus polaris septicus

Notes: Avian cholera was prevented in two chickens artificially infected with *Bacillus bipolaris septicus* by the subcutaneous inoculation of a five percent solution of carbolic acid.

511. Hadley, P.B. 1911. Studies on fowl cholera. I. A biological study of ten strains of the fowl cholera organism. Zentralblatt fur Bakteriologie, Parasitekunde und Infektionskrankheiten. 61(4/5):323-335.

Keywords: strain comparison, virulence, colony morphology, biochemical test, New England

Notes: The increase of endemic avian cholera in the New England States is reported. The study showed differing characteristics of isolates, including pathogenicity and morphology.

512. Hadley, P.B. 1910. Fowl cholera and methods of combatting it. Rhode Island Agricultural Experiment Station Bulletin 144:309-337.

Keywords: review, treatment, pathology, prevention

Notes: The early history, epidemiology, symptoms, pathology, causes, treatment, and prevention of fowl cholera are reviewed.

513. Hall, M.R., P.P. Williams and R.B. Rimler. 1987. A toxin from *Pasteurella multocida* serogroup D enhances swine herpesvirus 1 replication/lethality in vitro and in vivo. Current Microbiology 15:277-281.

Keywords: swine, mice, toxin, interaction, swine herpesvirus 1, pseudorabies virus, cell culture, pathogenesis

Notes: Administration of P.M. toxin with normally sublethal levels of swine herpesvirus 1 (pseudorabies virus) caused an increase in mortality and clinical disease in mice and swine.

514. Hall, W.J., K.L. Heddleston, D.H. Legenhausen and R.W. Hughes. 1955. Studies on pasteurellosis: I. A new species of *Pasteurella* encountered in chronic fowl cholera. American Journal of Veterinary Research 16(61):598-604.

Keywords: biochemical test, P.gallinarum, chicken

Notes: A bipolar, gram-negative, nonmotile microorganism, which has the attributes of a *Pasteurella*, was isolated from chickens suffering from chronic avian cholera.

515. Hamdy, A.H. and C.J. Blanchard. 1970. Effect of novobiocin on fowl cholera in turkeys. Avian Diseases 14(4):770-778.

Keywords: antibiotic, turkey, novobiocin, treatment

Notes: Novobiocin medication was shown to significantly reduce the mortality rate in turkeys following severe experimental infections of P.M.

516. Hansen, F.W. 1940. Peafowl. Veterinary Medicine 35(3):194-195.

Keywords: general, peafowl, Pavo cristatus, Pavo muticus, peacock, host range, case report

Notes: General article on the classification, husbandry, handling and disease conditions (including avian cholera) of peafowl.

517. Harry, E.G. and J.R. Deb. 1979. Laboratory and field trials on a formalin inactivated vaccine for the control of Pasteurella anatipestifer septicemia in ducks. Research in Veterinary Science 27(3):329-333.

Keywords: vaccine, P.anatipestifer, duck, related bacteria

Notes: A formalized P. anatipestifer vaccine was found to be the most suitable for protection against P. anatipestifer septicemia at doses of 3x10^9 cells administered intramuscularly.

518. Hart, L. 1963. Treatment of duck cholera with erythromycin. Australian Veterinary Journal 39(3):92-93.

Keywords: duck, sulfquinoxaline, treatment, antibiotic, erythromycin, sulfonamide, Australia

Notes: Administration of erythromycin in the drinking water abruptly halted mortality caused by P.M.

519. Harvey, R.B. 1978. Live cholera vaccine effective on breeder chickens. Texas field studies show more hatching eggs per bird and better feed conversion. Poultry Digest 37(437):336-337.

Keywords: vaccine, chicken, immunization, egg production, feed conversion

Notes: Use of the Clemson University strain vaccine on chickens via subcutaneous injections was shown to be effective against fowl cholera.

520. Hatfield, R.M., B.A. Morris and R.R. Henry. 1987. Development of an enzyme-linked immunosorbent assay for the detection of humoral antibody to Pasteurella anatipestifer. Avian Pathology 16:123-140.

Keywords: detection, serology, agglutination, agar gel immunodiffusion, duck, ELISA, enzyme-linked immunosorbent assay, comparison, antibody

Notes: An enzyme-linked immunosorbent assay was superior to the rapid slide agglutination test and the agar gel precipitin test in measuring duck antibody following exposure to P. anatipestifer.

521. Hazlewood, R.M., A.F. Oddo, R.D. Pagan and R.G. Botzler. 1978. The 1975-76 avian cholera outbreaks in Humboldt County, California. Journal of Wildlife Diseases 14(2):229-232.

Keywords: case report, California, Humboldt County, oxidation pond, wild bird, waterfowl, host range

Notes: Avian cholera outbreaks in Humboldt County, California, are reported with recording of the first known occurrence of avian cholera on one of the sites.

522. He, Z.Y. 1984. Co-agglutination test in the serotyping of Pasteurella multocida somatic antigen in fowl cholera (Chinese). Chinese Journal of Veterinary Medicine 10(6):30-31.

Keywords: strain comparison, co-agglutination, somatic antigen, hemagglutination, comparison

Notes: Results showed that the co-agglutination test was more sensitive, rapid and simple than the test tube hemagglutination test.

523. Heddleston, K.L. 1976. Physiologic characteristics of 1,268 cultures of Pasteurella multocida. American Journal of Veterinary Research 37(6):745-747.

Keywords: identification, strain comparison, related bacteria, medium, biochemical test, waterfowl, wild bird, sparrow, Passer domesticus, squirrel, mink, muskrat, screech owl, Otus asio, cottontail rabbit, Sylvilagus floridanus, seal, Callorhinus ursinus cyocephalus, quail, antelope, Antilocapra americana, buffalo, Bison bison, bear, Evarctos americana, small Canada goose, mockingbird, Mimus polyglottos, mallard, Anas platyrhynchos, widgeon, Branta hutchinsii, sea lion, Zalophus californianus, pintail, Anas acuta, eider, Somateria mollissima, snow goose, Chen hyperborea, host range

Notes: Results of 29 physiological tests on 1,268 cultures of P.M. from various hosts over a 10-year period indicated that none of the tests could distinguish the host from which the culture was isolated.

524. Heddleston, K.L. and G. Wessman. 1975. Characteristics of Pasteurella multocida of human origin. Journal of Clinical Microbiology 1(4):377-383.

Keywords: physiology, serology, colony morphology, culture, man, biochemical test, turkey, virulence, serotyping, strain comparison

Notes: The physiological, serological, morphological and cultural differences among 30 P.M. cultures of human origin were examined. None of the cultures were pathogenic for turkeys.

525. Heddleston, K.L., P.A. Rebers and G. Wessman. 1975. Fowl cholera: immunologic and serologic response in turkeys to live Pasteurella multocida vaccine administered in the drinking water. Poultry Science 54(1):217-221.

Keywords: vaccine, immunization, turkey, serology, age susceptibility, immunogenicity

Notes: Live fowl cholera vaccine administered in drinking water induced immunity in young turkeys against a challenge of a different immunogenic type of P.M.

526. Heddleston, K.L. and P.A. Rebers. 1975. Properties of free endotoxin from Pasteurella multocida. American Journal of Veterinary Research 36(4):573-574.

Keywords: lipopolysaccharide, capsule, virulence, Limulus test, agar gel immunodiffusion, endotoxin, immunity, serology, toxin

Notes: Free endotoxin, but not lipopolysaccharide, isolated from a virulent encapsulated P.M. or from an avirulent nonencapsulated mutant was capable of inducing active immunity.

527. Heddleston, K.L. and P.A. Rebers. 1974. Fowl cholera bacterins: host-specific cross-immunity induced in turkeys with Pasteurella multocida propagated in embryonating turkey eggs. Avian Diseases 18(2):213-219.

Keywords: vaccine, turkey, embryonated egg, immunization, turkey embryo, antigen, immunity

Notes: The cross-immunity induced in turkeys was shown to be host-specific. The responsible antigen was produced only when P.M. was grown in embryonated turkey eggs.

528. Heddleston, K.L. and G. Wessman. 1973. Vaccination of American bison against Pasteurella multocida serotype 2 infection (hemorrhagic septicemia). Journal of Wildlife Diseases 9:306-310.

Keywords: immunization, serotyping, black bear, pronghorn antelope, American bison, P.haemolytica, parainfluenza-3 virus, hemorrhagic septicemia, Bison bison, bear, host range, bison

Notes: Results of bacteriological and serological studies on a herd of American bison, in which calves were vaccinated yearly, are reported.

529. Heddleston, K.L., T. Goodson, L. Leibovitz and C.I. Angstrom. 1972. Serological and biochemical characteristics of Pasteurella multocida from free-flying birds and poultry. Avian Diseases 16(4):729-734.

Keywords: serotyping, virulence, pathogenesis, waterfowl, wild bird, biochemical test, serology, turkey, duck, chicken, small Canada goose, blue goose, coot, oldsquaw, white winged scoter, snow goose, herring gull, pheasant, robin, starling, evening grosbeak, pine siskin, wild turkey, bald eagle, Canada goose, host range, Haliaeetus leucocephalus, Spinus pinus, Hesperiphona vespertina, Phasianus colchicus, Turdus migratorius, Sturnus vulgaris, Branta c.hutchinsii, Chen hyperborea, Chen caerulescens, Fulica americana, Clangula hyemalis, Melanitta deglandi, Larus argentatus, gull

Notes: There was a relationship between the epornitics of avian cholera in white pekin ducks and herring gulls, and a relationship between some of the outbreaks in chickens, turkeys and a pheasant.

530. Heddleston, K.L., J.E. Gallagher and P.A. Rebers. 1972. Fowl cholera; gel diffusion precipitin test for serotyping Pasteurella multocida from avian species. Avian Diseases 16(4):925-936.

Keywords: serology, vaccine, agar gel immunodiffusion, immunization, immunoelectrophoresis, turkey

Notes: The gel diffusion precipitin test using heat-stable antigens extracted with formalinized saline was used to group P.M. associated with avian cholera into five serotypes.

531. Heddleston, K.L. and P.A. Rebers. 1972. Fowl cholera: cross immunity induced in turkeys with formalin-killed in-vivo-propagated Pasteurella multocida. Avian Diseases 16(3):578-586.

Keywords: immunity, turkey, vaccine, mice

Notes: Bacterins prepared with liver and blood from a turkey that died of acute fowl cholera induced immunity in turkeys against a different immunogenic type of P.M.

532. Heddleston, K.L., J.E. Gallagher and P.A. Rebers. 1970. Fowl cholera: immune response in turkeys. Avian Diseases 14(4):626-635.

Keywords: strain comparison, serology, immunity, turkey, vaccine

Notes: Bacterins prepared from three strains of formalinized P.M. induced a high degree of immunity against homologous but not heterologous challenge, indicating at least three immunogenic types of P.M.. However, a heterologous immune response was observed upon reexposure to different live P.M. strains.

533. Heddleston, K.L. and P.A. Rebers. 1968. Fowl cholera: active immunity induced in chickens and turkeys by oral administration of killed Pasteurella multocida. Avian Diseases 12:129-134.

Keywords: immunity, passive immunity, active immunity, mice, chicken, turkey, vaccine, agglutination, agar gel immunodiffusion

Notes: Immunity was induced in chickens and turkeys but not in mice by oral administration of killed P.M. Results indicated that the amount of vaccine needed to induce immunity via this method was relatively large compared with parenteral administration. A bacterin prepared with bacteria grown on laboratory medium did not induce immunity against heterologous challenge.

534. Heddleston, K.L., K.R. Rhoades and P.A. Rebers. 1967. Experimental pasteurellosis: comparative studies on Pasteurella multocida from Asia, Africa, and North America. American Journal of Veterinary Research 28(125):1003-1012.

Keywords: strain comparison, cattle, shipping fever, chicken, bison, zebu cattle, swine, mice, sheep, susceptibility, passive immunity, Asia, Africa

Notes: Pathogenic, immunologic and serologic properties and biochemical reactions of three strains of P.M. isolated from animals with pasteurellosis were studied.

535. Heddleston, K.L. 1966. Immunologic and serologic comparison of three strains of Pasteurella multocida. Cornell Veterinarian 56(2):235-241.

Keywords: immunogenicity, serology, strain comparison, chicken

Notes: Three strains of P.M. conferred a high degree of immunity against homologous and heterologous challenge.

536. Heddleston, K.L., P.A. Rebers and A.E. Ritchie. 1966. Immunizing and toxic properties of particulate antigens from two immunogenic types of Pasteurella multocida of avian origin. Journal of Immunology 96(1):124-133.

Keywords: particulate antigen, endotoxin, protection, colony morphology, lipopolysaccharide, immunization, toxin, chicken, antigen

Notes: "Particulate antigens", isolated from two immunogenically distinct types of P.M. of avian origin, gave almost 100% protection against challenge with live organisms to chickens. Injection of 0.1 to 0.5 mg of the antigen produced toxic effects.

537. Heddleston, K.L. and L.P. Watko. 1965. Fowl cholera: comparison of serologic and immunogenic responses of chickens and turkeys. Avian Diseases 9(3):367-376.

Keywords: detection, vaccine, susceptibility, serology, chicken, turkey, passive immunity, agglutination, agar gel immunodiffusion, mice

Notes: Monovalent vaccines gave better protection to homologous challenge than bi- or tri-valent vaccines. Turkeys were more susceptible to P.M. than chickens.

538. Heddleston, K.L., L.P. Watko and P.A. Rebers. 1964. Dissociation of fowl cholera strain of Pasteurella multocida. Avian Diseases 8(4):649-657.

Keywords: strain comparison, colony morphology, turkey, chicken, rabbit, virulence, mice, biochemical test, capsule

Notes: A direct relationship of virulence to colony morphology was observed, with flourescent colonies being the most virulent. Loss of capsule forming ability decreased virulence but not immunogenicity. Organisms from the three types of colonies could not be differentiated by biochemical tests or by the serologic or immunologic response in chickens.

539. Heddleston, K.L. 1962. Studies on pasteurellosis. V. Two immunogenic types of Pasteurella multocida associated with fowl cholera. Avian Diseases 6(3):315-321.

Keywords: biochemical test, strain comparison, immunogenicity, vaccine, pathogenesis, serotyping, turkey

Notes: Immunological, pathogenic, serological and biochemical differences are reported between a vaccine strain of P.M. and a strain isolated from a turkey flock. A vaccine prepared with both types afforded a high level of immunity against each strain. Monovalent vaccines gave no cross-protection.

540. Heddleston, K.L. and R.C. Reisinger. 1960. Studies on pasteurellosis. IV. Killed fowl cholera vaccine adsorbed on aluminum hydroxide. Avian Diseases 4:429-435.

Keywords: vaccine, stress, adjuvant, immunization, immunosuppression, fowl pox

Notes: Aluminum hydroxide-absorbed killed avian cholera vaccine produced an effective immunity to avian cholera for at least one year. Stress and concurrent fowl pox infection adversely affected the resistance of birds to avian cholera.

541. Heddleston, K.L. and R.C. Reisinger. 1959. Studies on pasteurellosis. III. Control of experimental fowl cholera in chickens and turkeys with an emulsified killed vaccine. Avian Diseases 3:397-404.

Keywords: vaccine, chicken, turkey, immunization, strain comparison

Notes: Lowering the concentration of suspended formalin-killed P.M. did not affect immunity. Selection criteria for strains suitable for vaccine production and methods of producing vaccines are given.

542. Heddleston, K.L. and W.J. Hall. 1958. Studies on pasteurellosis. II. Comparative efficiency of killed vaccines against fowl cholera in chickens. Avian Diseases 2(3):322-335.

Keywords: protection, vaccine, chicken

Notes: Results of studies on one commercial and five experimental vaccines against fowl cholera are reported.

543. Hefferman, B.E. 1968. Disease experts tell how to fight cholera onslaught. Turkey World May:16-18.

Keywords: turkey, prevention, control, general, Virginia

Notes: The steps used in the Virginia avian cholera control program are given.

544. Heilmann, P. and G. Muller. 1987. Broncho-alveolar clearance after inhalation of Pasteurella multocida aerosol in young pigs (German/E). Journal of Veterinary Medicine, Series B 34(2):126-127.

Keywords: swine, macrophage, phagocytosis, granulocyte, broncho-alveolar clearance, lymphocyte

Notes: Broncho-alveolar cells, alveolar macrophages and neutrophil granulocytes participated in the clearance of P.M. from the lungs of young pigs.

545. Helfer, D.H. and C.F. Helmboldt. 1977. Pasteurella anatipestifer infection in turkeys. Avian Diseases 21(4):712-715.

Keywords: case report, related bacteria, P.anatipestifer, turkey, treatment, antibiotic, neomycin, oxytetracycline

Notes: Fibrinous pericarditis and epicarditis, suggestive of chlamydial infection, was the primary lesion seen at necropsy, but P. anatipestifer was isolated. The disease responded to a combination of neomycin and oxytetracycline.

546. Heller, O. 1957. Geese as carriers of fowl cholera (German). Monatshefte fur Veterinarmedizin 1957:218.

Keywords: carrier, goose, East Germany, chicken, transmission

Notes: Chickens kept with subclinically infected geese contracted avian cholera. On another farm, four of seven chickens became ill and died of avian cholera one week after they were fed raw viscera from a goose.

547. Hendrickson, J.M. and K.F. Hilbert. 1932. The persistance of Pasteurella avicida in the blood and organs of fowls with spontaneous fowl cholera. Journal of Infectious Diseases 50:89-97.

Keywords: P.avicida, chicken, survival, persistance, bacteremia, temperature, hemagglutination, antibody, serology, location, carrier

Notes: P. avicida multiplied rapidly in the blood of infected chickens just before death. The bacterium could be found in the blood for at least 49 days in chronically infected birds. The bacterium survived in the carcass for 11 days at room temperature and two months in the refrigerator.

548. Henning, M.W. and J.D.W.A. Coles. 1933. On fowl cholera in South Africa. Journal of the South African Veterinary Medical Association 4(3):166-169.

Keywords: case report, pathogenesis, P.aviseptica, chicken, duck, rabbit, mice, wattle edema

Notes: The occurrence of avian cholera in South Africa with the isolation of P. aviseptica is reported.

549. Henrikson, S.D. and L.O. Froeholm. 1975. A fimbriated strain of Pasteurella multocida with spreading and corroding colonies. Acta Pathologica et Microbiologica Scandinavica, Section B: Microbiology 83(2):129-132.

Keywords: culture, colony morphology, man, middle ear infection, growth, fimbriae

Notes: A fimbriated strain of P.M. was isolated from the middle ear of a human. The strain formed spreading colonies on blood agar.

550. Hertman, I., J. Markenson, A. Michael and E. Geier. 1979. Attenuated live fowl cholera vaccine. I. Development of vaccine strain M3G of Pasteurella multocida. Avian Diseases 24(4):863-869.

Keywords: vaccine, mutant, serotyping, turkey, chicken, mice, mutagenesis, N-methyl-N'-nitro-N-nitrosoguandidine, serotype 1, virulence

Notes: A live avian cholera vaccine was developed from a virulent avian septicemia strain of P.M. serotype 1 by mutagenesis. Mutants were selected that had either smaller colonies at 37C or temperature sensitivity at 41C. The M3G small colony strain was innocuous for both mice and turkeys.

551. Higgins, C.H. 1898. Notes upon an epidemic of fowl cholera and upon the comparative production of acid by allied bacteria. Journal of Experimental Medicine 3:651-668.

Keywords: biochemical test, strain comparison, chicken, related bacteria, Canada, Quebec, case report

Notes: A bacillus was isolated from an outbreak of choleric diarrhea in chickens in Quebec, Canada.

552. Higgins, D.A. 1971. Nine disease outbreaks associated with myxoviruses among ducks in Hong Kong. Tropical Animal Health and Production 3(4):232-240.

Keywords: case report, Newcastle disease, avian influenza, Hong Kong, myxovirus, duck, secondary infection

Notes: Nine disease outbreaks were associated with myxovirus, including acute syndromes due to Newcastle disease virus, one of which was complicated by P.M.

553. Higgins, D.A. 1969. Some studies of fowl cholera in Hong Kong. British Veterinary Journal 125(12):622-634.

Keywords: chronic infection, whole blood agglutination test, immunization, biochemical test, strain comparison, Hong Kong, agglutination

Notes: Nine weeks after an acute outbreak, 96 percent of the surviving birds were chronically infected. Vaccination then reduced the level of infection to 44 percent.

554. Higgins, R.J. and C.J. Randall. 1981. Pasteurella multocida meningoencephalitis in a pheasant (Phasianus colchicus). Veterinary Record 108(16):360.

Keywords: case report, meningoencephalitis, pheasant, Phasianus colchicus, host range

Notes: P.M. was isolated in pure culture from an 8 week old pheasant poult that suffered from purulent meningoencephalitis.

555. Hilbert, K.F. and J.S. Kiser. 1948. Chemotherapy of duck diseases with sulfonamides. Cornell Veterinarian 38(2):148-155.

Keywords: treatment, sulfonamide, sulfamethazine, chlorosulfadiazine, duck, antibiotic, related bacteria, P.anatipestifer

Notes: Sodium sulfamethazine or chlorosulfadiazine were effective in treatment of anatipestifer infection ("new duck disease") and acute avian cholera.

556. Hilbert, K.F. and H. Tax. 1938. The value of chemically-killed cultures for the control of cholera in ducks. Cornell Veterinarian 28(4):275-280.

Keywords: vaccine, phenol, duck, immunization

Notes: A whole-culture, phenol-inactivated bacterin was sucessful in the control of avian cholera.

557. Hill, W.C.O. 1957. Report of the Society's Prosector for the years 1955 and 1956. Proceedings of the Zoological Society of London 129:431-446.

Keywords: emerald starling, Coccycolius iris, bronze-winged dove, Phaps chalcoptera, host range, case report, starling, dove, zoo

Notes: A two-year report on postmortem examinations performed on 2,108 animals lying in the Regents Park collection, including avian cholera in emerald starlings and a bronze-winged dove.

558. Hill, W.C.O. 1953. Report of the Society's Prosector for the year 1952. Proceedings of the Zoological Society of London 123:227-251.

Keywords: case report, king vulture, Sarcoramphus, vulture, host range, zoo

Notes: An extensive report was made on 1,049 necropsies carried out on animals dying at Regent's Park, London. A case of avian cholera in a king vulture is mentioned.

559. Hinshaw, W.R. and J.E. Emlen. 1943. Pasteurellosis in California Valley quail. Cornell Veterinarian 33(4):351-354.

Keywords: case report, California Valley quail, Lophortyx californica, California, host range, quail

Notes: The first reported outbreak of avian cholera in California Valley quail is presented.

560. Hippe, W. and T. Schliesser. 1981. Cultural and serological studies on Pasteurella multocida strains from rabbits with disease of the upper respiratory tract (German/E). Zentralblatt fur Veterinarmedizin, Reihe B 28(8):645-653.

Keywords: rhinitis, sulfonamide, strain comparison, capsular antigen, antibiotic sensitivity, biochemical test, rabbit, colony morphology, erythromycin, chloramphenicol, tetracycline, penicillin, streptomycin, tylosin, sulfamethoxazole, trimethoprim, antibiotic, treatment, serotype D, serotype A

Notes: Bacteriological studies on 71 strains of P.M. isolated from nasal swabs of rabbits with catarrhal purulent rhinitis showed that one strain was type D and the rest were type A.

561. Hirota, Y. and Y. Bito. 1975. Diverse effects of bursectomy on humoral immune responses in the chicken. Poultry Science 54(5):1524-1538.

Keywords: hormonal bursectomy, Salmonella pullorum, related bacteria, Brucella abortus, Staphylococcus aureus, bursectomy, Escherichia coli, antibody type, humoral immunity, antibody, bursa of Fabricius

Notes: The diversity of bursal influences on antibody responses is discussed in relation to ontogeny of the humoral immune system.

562. Hirsh, D.C., L.D. Martin and K.R. Rhoades. 1985. Resistance plasmids of Pasteurella multocida isolated from turkeys. American Journal of Veterinary Research 46(7):1490-1493.

Keywords: plasmid, turkey, strain comparison, antibiotic resistance, antibiotic, serotype 3, mutant

Notes: Fifty-eight strains of P.M. type 3 were isolated from turkeys and examined for resistance plasmids. Plasmids were not widely dispersed among type 3 strains examined, probably because of their non-transmissible nature.

563. Hirsh, D.C., L.D. Martin and K.R. Rhoades. 1981. Conjugal transfer of an R-plasmid in Pasteurella multocida. Antimicrobial Agents and Chemotherapy 20(3):415-417.

Keywords: plasmid, turkey, streptomycin resistance, sulfadiazine resistance, bacterial conjugation, resistance transfer, antibiotic resistance, antibiotic, mutant

Notes: A strain of P.M. isolated from turkeys was able to transfer streptomycin and sulfadiazine resistance to P.M. and Escherichia coli by conjugation. Transfer genes and resistance genes were on separate plasmids.

564. Hirsh, D.C., S.J. Knox, G.M.Jr. Conzelman and N. Wiger. 1978. Pharmacokinetics of penicillin G in the turkey. American Journal of Veterinary Research 39(7):1219-1221.

Keywords: penicillin, sulfonamide resistance, turkey, half-life, antibiotic sensitivity, antibiotic resistance, sulfonamide, antibiotic

Notes: The elimination of penicillin G followed first-order kinetics, with a half-life of 0.5 hours.

565. Hjarre, A. and V. Sahlestedt. 1943. Pasteurellosis in wild animals in captivity (Swedish). Sven. Vet. Tidskr. 48:325.

Keywords: host range, zoo

Notes: (ONS)

566. Hofacre, C.L., J.R. Glisson and S.H. Kleven. 1987. Comparison of vaccination protocols of broiler breeder hens for Pasteurella multocida utilizing enzyme-linked immunosorbent assay and virulent challenge. Avian Diseases 31(2):260-263.

Keywords: ELISA, immunization, chicken, enzyme-linked immunosorbent assay, serology, antibody

Notes: Various vaccination protocols were compared using ELISA techniques and challenge.

567. Hofacre, C.L. and J.R. Glisson. 1986. A serotypic survey of Pasteurella multocida isolated from poultry. Avian Diseases 30(3):632-633.

Keywords: serotyping, strain comparison, chicken, turkey, identification, agar gel immunodiffusion

Notes: P.M. isolates from turkeys and chickens were serotyped by gel diffusion precipitin tests.

568. Hofer, M., K.D. Flossman, W. Erler and H. Feist. 1982. Nutrient media for culturing Pasteurella multocida (German/E). Archiv fur Experimentelle Veterinarmedizin 36(4):565-575.

Keywords: growth inhibition, sodium chloride, medium, culture, fumaric acid

Notes: Recipes are given for chemically defined nutrient media and partially defined yeast extract media suitable for growth of 118 strains.

569. Hofer, M. and K.D. Flossman. 1981. Utilization of aspartate, malate and fumarate by Pasteurella multocida (German/E). Zeitschrift fur Allgemeine Mikrobiologie 21(9):651-660.

Keywords: growth, biochemical test, succinic acid, culture medium, physiology, citric acid cycle

Notes: P.M. used L-aspartate, L-malate, and furmarate as substrates for production of succinic acid.

570. Hoffenreich, F. 1928. The capsule of Bacillus avisepticus (German). Zentralblatt fur Bakteriologie Abteilung Originale 108(1/4):87-89.

Keywords: capsule, lipopolysaccharide, Bacillus avisepticus

Notes: The capsule substance from Bacillus avisepticus was isolated and characterized as a polysaccharide.

571. Hoffman, H.A. and D.E. Stover. 1942. An analysis of thirty thousand autopsies on chickens. California Department of Agriculture Bulletin 31:7-13.

Keywords: case report, chicken, related bacteria, parasite, diet

Notes: Reports on more than 30,000 autopsies on chickens over a 10-year period. Avian cholera was responsible for 2.9 percent of all diseases in birds of all ages.

572. Hoffman-Goetz, L. and M.J. Kluger. 1979. Protein deprivation: its effects on fever and plasma iron during bacterial infection in rabbits. Journal of Physiology 295:419-430.

Keywords: plasma iron, pyrogen, nutrition, leukocyte, fever, diet, protein deprivation, rabbit

Notes: Injection of P.M. into protein-deprived rabbits led to an attenuated 24-hour fever compared to the fever in control rabbits.

573. Hofing, G.L., H.G. Rush, A.R. Petkus and J.C. Glorioso. 1979. In vitro killing of Pasteurella multocida: the effect of rabbit granulocyte and specific antibody source. American Journal of Veterinary Research 40(5):679-683.

Keywords: antibody, granulocyte, carrier, phagocyte, phagocytosis, rabbit

Notes: Chronic P.M. infections were not attributable to defective granulocytes or lack of serum antibody production.

574. Holmes, H.T., M. Matsumoto, N.M. Patton and B.R. Zehfus. 1986. Serologic methods for detection of Pasteurella multocida infections in nasal culture negative rabbits. Laboratory Animal Science 36(6):640-645.

Keywords: ELISA, identification, serology, carrier, rabbit, enzyme-linked immunosorbent assay, detection, agar gel immunodiffusion

Notes: The ELISA was shown to be more efficacious than agar gel immunodiffusion in identifying rabbits that were subclinical carriers of P.M.

575. Holubnychyi, V.P. 1974. Simultaneous immunization of poultry against Newcastle disease and fowl cholera (Russian). Veterinarya (Kiev) 39:93-94.

Keywords: chicken, Newcastle disease, immunization, simultaneous vaccination, combined vaccine

Notes: Chickens could be simultaneously vaccinated against Newcastle disease and avian cholera.

576. Horvath, Z., M. Padanyi and Z. Palatka. 1962. Experiments for treating fowl cholera using chlorocid ad us vet. (Hungarian/E). Magyar Allatorvosok Lapja 17(9):332-336.

Keywords: chicken, antibiotic, treatment, chlorocid, chloramphenicol

Notes: Field and laboratory trials of the treatment of avian cholera infected flocks with chlorocid are reported.

577. Hu, S.P., L.J. Felice, V. Sivanandan and S.K. Maheswaran. 1986. Siderophore production by Pasteurella multocida. Infection and Immunity 54(3):804-810.

Keywords: growth, culture medium, multocidin, siderophore, iron, virulence

Notes: P.M. grown under conditions of iron deprivation secreted a growth-enhancing factor that functioned as a siderophore.

578. Hubbert, W.T. and M.N. Rosen. 1970. I. Pasteurella multocida infection due to animal bite. American Journal of Public Health 60(6):1103-1108.

Keywords: transmission, case report, human, man, bite, dog, cat

Notes: Epidemiological summaries of 180 human cases of P.M. infections between 1965 and 1968 due to animal bites are reported.

579. Hudson, C.B. 1944. Fowl cholera in ring-necked pheasants. Journal of the American Veterinary Medical Association 104:211-212.

Keywords: pheasant, P.avicida, case report, host range, ringneck pheasant

Notes: Report on the isolation of an organism similar to that of avian cholera from an outbreak on a pheasant farm is presented.

580. Hughes, T.P. and I.W. Pritchett. 1930. The epidemiology of fowl cholera. III. Portal of entry of P. avicida; reaction of the host. Journal of Experimental Medicine 51:239-248.

Keywords: chicken, wattle edema, virulence, transmission, portal of entry, P.avicida

Notes: Tests to determine the normal portal of entry of P. avicida organisms into the chicken host are described.

581. Hughes, T.P. 1930. The epidemiology of fowl cholera. II. Biological properties of P. avicida. Journal of Experimental Medicine 51:225-238.

Keywords: chicken, strain comparison, P.avicida, colony morphology, virulence

Notes: Results of the routine and special examination of 210 strains of P. avicida isolated from avian cholera outbreaks are presented.

582. Hungerford, T.G. 1968. A clinical note on avian cholera. The effect of age on susceptibility of fowls. Australian Veterinary Journal 44(1):31-32.

Keywords: age, immunization, chicken, contaminated vaccine, virulence, resistance, infectious laryngotracheitis virus, vaccine

Notes: Field evidence showed young fowl up to 16 weeks of age were capable of resisting avian cholera infection to which mature fowl succumbed. The field test resulted from the use of an infectious laryngotracheitis vaccine that was heavily contaminated with P.M.

583. Hunter, B. and G. Wobeser. 1980. Pathology of experimental avian cholera in mallard ducks. Avian Diseases 24(2):403-414.

Keywords: lesion, pathogenesis, virulence, Anas platyrhynchos, mallard, pathology, host range, wild bird, waterfowl, duck

Notes: Mallards challenged with two isolates of P.M. developed either acute or chronic lesions depending on the isolate and inoculation dose.

584. Hunter, B. 1977. Controlling waterfowl disease. Outdoor California 38(5):21-24.

Keywords: review, California, pintail, widgeon, white-fronted dove, snow goose, swan, coot, dove, host range, waterfowl, wild bird, duck, goose

Notes: The various diseases affecting wintering waterfowl in California, including fowl cholera, duck viral enteritis and botulism, are discussed.

585. Hunter, B.F. 1967. Isolation of Pasteurella multocida from a snowy owl (Nyctea scandiaca), a new host record. California Fish and Game 53(3):213-214.

Keywords: California, case report, snowy owl, Nyctea scandiaca, host range, wild bird, owl

Notes: A snowy owl, feeding on ducks infected with P.M., died a few hours after its capture.

586. Huq, A.Y.M.A. 1976. A comparison of Pasteurella multocida isolated from healthy cattle and cattle with shipping fever. III. The comparison with reference to Carter's type A, B, C and D. Indian Veterinary Journal 53(5):319-322.

Keywords: cattle, strain comparison, stress, pathology, shipping fever, serotype A, serotype B, serotype C, serotype D

Notes: No important differences between isolates obtained from healthy and sick cattle were observed. Pathological changes were produced when the host animal was subjected to stress.

587. Hussaini, S.N. 1975. Nomenclature and taxonomy of Pasteurella multocida. Veterinary Bulletin 45(6):403-409.

Keywords: taxonomy, classification, strain comparison, serotyping, biochemical test, DNA

Notes: The history and synonymy of P.M. is reviewed. The application of numerical taxonomy is suggested as a preferred approach to classification.

588. Hwang, E.J., H.T. Holmes, B.P. Zehfus, N.P. Patton and M. Matsumoto. 1986. Characterization of antigen purified from type 3 strains of Pasteurella multocida and its use for an enzyme-linked immunosorbent assay. Laboratory Animal Science 36(6):633-639.

Keywords: antigen isolation, detection, strain comparison, ELISA, serotype 3, rabbit, enzyme-linked immunosorbent assay, antigen

Notes: An enzyme-linked immunosorbent assay, using a purified type 3 antigen, was useful in detecting P.M. infection in rabbits.

589. Ianconescu, M. 1977. Reticuloendotheliosis antigen for the agar gel precipitation test. Avian Pathology 6(3):259-267.

Keywords: antigen, agar gel immunodiffusion, reticuloendotheliosis virus, chick embryo, detection

Notes: An antigen for gel precipitation was prepared from chicken embryo fibroblast cultures inoculated with the reticuloendotheliosis virus. No cross-reacting precipitation reaction occurred with P.M.

590. Iaranova, L.A. 1970. Specific tissue preparation against fowl cholera (Russian/E). Moskovskaya Veterinarya Akademiya Imeni K.I. Skryabina Sbornik Nauchnykh Trudow 54:129-130,-132-132.

Keywords: antibiotic, treatment, chicken, prevention, biomycin

Notes: Survival of chickens treated with a special compound was 33.1 percent higher than the control group and 14 percent higher than a group treated with biomycin.

591. Iliev, T., R. Arsov, E. Iovchev, G. Girginov and I. Dimov. 1965. The carrier state in fowls infected with non-pathogenic Pasteurella strains (Bulgarian). Nauchni Trudove Vissh Veterinarnomeditsinski Institute "Prof. D-r-G Pavlov" 14:19-22.

Keywords: carrier, chicken, detection

Notes: P.M. infections of chickens were monitored for 50 to 60 days.

592. Iliev, T., R. Arsov and V. Lazarov. 1965. Can fowls, carriers of Pasteurella, excrete the organism in feces?. Nauchni Trudove Vissh Veterinarnomeditsinski Institute "Prof. D-r-G Pavlov" 14:7-12.

Keywords: carrier, feces, chicken, transmission, detection

Notes: P.M. was detected in feces of chronically infected chickens.

593. Iliev, T., R. Arsov, E. Iovchev and G. Girginov. 1963. Role of swine in the epidemiology of fowl cholera (Bulgarian). Nauchni Trudove Vissh Veterinarnomeditsinski Institute "Prof. D-r-G Pavlov" 11:289-293.

Keywords: swine, reservoir, carrier, transmission, chicken

Notes: Swine were considered as a reservoir of infection for fowl.

594. Iliev, T., G. Girginov, R. Arsov and E. Iovchev. 1963. Role of rodents in the epidemiology of fowl cholera (Bulgarian/E). Nauchni Trudove Vissh Veterinarnomeditsinski Institute "Prof. D-r-G Pavlov" 11:295-300.

Keywords: rodent, reservoir, transmission, mice, rat

Notes: Mice and rats were found to be chronic carriers of P.M. after feeding on fowl carcasses.

595. Iliev, T., R. Arsov, G. Girginov and E. Iovchev. 1963. The carrier state in fowl cholera (Bulgarian). Nauchni Trudove Vissh Veterinarnomeditsinski Institute "Prof. D-r-G Pavlov" 11:271-279.

Keywords: chicken, carrier, detection

Notes: The occurrence of a carrier state infection in chickens was demonstrated.

596. Iliev, T., G. Girginov, E. Iovchev and R. Arsov. 1963. Age susceptibility in fowl cholera (Bulgarian/E). Nauchni Trudove Vissh Veterinarnomeditsinski Institute "Prof. D-r-G Pavlov" 11:301-304.

Keywords: age, susceptibility, chicken, pathogenesis

Notes: The effect of age on susceptibility to P.M. infection was studied.

597. Iliev, T., R. Arsov, I. Dimov, G. Girginov and E. Iovchev. 1963. Swine, cattle and sheep infection for fowl (Bulgarian). Nauchni Trudove Vissh Veterinarnomeditsinski Institute "Prof. D-r-G Pavlov" 11:281-288.

Keywords: swine, reservoir, carrier, transmission, cattle, sheep, chicken, virulence

Notes: The infectivity for chickens of P.M. strains isolated from swine, cattle and sheep was studied.

598. Iordache, A., C. Ungureanu, R. Putsche and D. Schimmel. 1980. Recommendations for isolation and differentiation of Pasteurella multocida (German/E). Archiv fur Experimentelle Veterinarmedizin 34(5):753-758.

Keywords: diagnosis, isolation, identification

Notes: Techniques for isolation and differentiation of P.M. as used at two European institutes are given.

599. Iordache, A. and C. Ungureanu. 1979. Investigations on the bacteriocinogenic activity of Pasteurella (French/E). Archiva Veterinaria 14(0):23-26.

Keywords: sheep, cattle, antagonism, P.haemolytica, strain comparison, bacteriocin

Notes: Iso- and heteroantagonistic relationships determined by bacteriocins in 86 strains of P.M. isolated from young sheep and cattle from outbreaks of pneumonia were investigated.

600. Iordache, A., C. Ungureanu, U. Fierlinger, V. Paduraru and S. Angelescu. 1978. Hyaluronidase action on the agglutinability of the capsular antigen of Pasteurella multocida (Romanian/E). Lucrarile Institutului de Cercetari Veterinare si Biopreparate "Pasteur" 14:187-191.

Keywords: antigen isolation, serotyping, hemagglutination, strain comparison, hyaluronidase, capsular antigen

Notes: Using the indirect hemagglutination test, the combined utilization of both the traditional antigen preparation method and hyaluronidase treatment of the antigen permitted classification of 12 percent more strains.

601. Iordache, A., C. Ungureanu and U. Fierlinger. 1978. Researches concerning the presence of hemolysines in Pasteurella multocida (Romanian/E). Lucrarile Institutului de Cercetari Veterinare si Biopreparate "Pasteur" 14:169-174.

Keywords: hemolysin, P.haemolytica, guinea pig, rabbit, swine, chicken, sheep, erythrocyte

Notes: All of 100 strains of P.M. and P. haemolytica produced hemolysins, with the sensitivity of erythrocytes varying by source; the most sensitive were from guinea pigs.

602. Iordache, A. and C. Ungureanu. 1973. Serologic type identification of the Pasteurella multocida and Pasteurella haemolytica isolated from young cattle in a bronchopneumonia outbreak (Romanian). Revista de Zootehnie si Medicina Veterinara 23(11):37-41.

Keywords: serotyping, strain comparison, serotype A, serotype D, P.haemolytica, cattle, bronchopneumonia, related bacteria

Notes: Of 31 P.M. isolates tested, 17 were serotype D, 13 were serotype A and the rest could not be serotyped.

603. Iordache, A. 1966. Studies on the sensitivity of certain strains of Pasteurella multocida var. avium to various type-colicins (Romanian/E). Lucrarile Institutului de Cercetari Veterinare si Biopreparate "Pasteur" 5:321-326.

Keywords: bacteriocin, chicken, duck, turkey, goose, strain comparison

Notes: All P.M. strains tested were sensitive to a variety of colicins with identical sensitivity patterns, regardless of source.

604. Iordache, A. 1965. Investigations concerning the sensitivity to colicines of some Pasteurella strains isolated from foci of avian pasteurellosis (Romanian/E). Lucrarile Institutului de Cercetari Veterinare si Biopreparate "Pasteur" 4(1/2):141-148.

Keywords: Escherichia coli, bacteriocin, strain comparison, related bacteria

Notes: Fifteen strains of P.M. were found to be sensitive to colicins.

605. Iovchev, E. 1967. The role of Argas persicus in the epidemiology of fowl cholera (German/E). Angewandte Parasitologie 8:114-117.

Keywords: reservoir, vector, chicken, Argas persicus, transmission, virulence, tick

Notes: Studies of Argas persicus and its role in infection found ticks could transmit avian cholera from another bird if the ingested blood was released from the tick.

606. Ishchenko, G. and I. Dubrov. 1983. Pasteurellosis of ducks and geese (Russian). Ptitsevodstvo 12:23-24.

Keywords: vaccine, USSR, duck, goose, Krasnodar territory

Notes: The occurrence of avian cholera in the Krasnoder region of the USSR is reviewed, with reference to vaccines.

607. Ishchenko, G.D. and I.S. Dubrov. 1982. Aerosol immunization of ducks against pasteurellosis (Russian). Veterinariya (Moscow) 8:31.

Keywords: vaccine, aerosol, immunization, duck, prevention

Notes: The use of aerosols for administration of an avian cholera vaccine is briefly discussed.

608. Ivanov, B.S. 1964. Fowl cholera control (Russian). Veterinariya (Moscow) 7:47.

Keywords: chicken, control, treatment

Notes: Avian cholera control measures are described in brief.

609. Ivanov, B.S. 1964. Fowl cholera-control (Russian). Veterinarya (Moscow) 7:47.

Keywords: control, review, treatment, antibiotic, vaccine

Notes: The control of fowl cholera is discussed.

610. Ivanov, V. and E. Doicheva. 1979. Changes in free amino acid content in infections due to gram negative agents (Bulgarian/E). Veterinarno-Meditsinski Nauki 16(7):34-41.

Keywords: amino acid, pathogenesis, Salmonella abortisuis, chicken, host physiology, plasma, related bacteria, Salmonella

Notes: There was a conderable reduction (up to half) in 16 amino acids 3 days after intravenous inoculation of the bacteria or 6 hours after endotoxin inoculation in both sheep and fowls.

611. Ivanov, V. 1975. Changes in the carbohydrate metabolism in chickens experimentally infected with Pasteurella multocida (Bulgarian/E). Veterinarno-Meditsinski Nauki 12(5):92-97.

Keywords: carbohydrate, enzyme, metabolic change, chicken, pathogenesis, host physiology, glucose-6-phosphatedehydrogenase, glucose-6-phosphatase

Notes: Following infection with P.M., chickens showed an abrupt decrease in liver glycogen, a slight rise in blood sugar, and there was a doubling of glucose-6-phosphate dehydrogenase, while glucose-6-phosphatase activity remained unchanged.

612. Ivanov, V. and C.S. Popov. 1972. Changes in the stability of liver lysosomes of hens experimentally infected with Pasteurella multocida. Doklady Bolgarskoi Akademii Nauk 25(8):1153-1155.

Keywords: chicken, liver lysosome, lysosome, pathology, host physiology

Notes: (ONS)

613. Ivanov, V. 1971. A scheme of the pathogenic mechanism of avian pasteurellosis (French/E). Revue de Medicine Veterinaire 122(1):45-52.

Keywords: pathogenesis, virulence, dehydration, edema, vitamin metabolism, nutrition

Notes: The pathogenic mechanisms and their interactions are presented in a complex schematic.

614. Ivanov, V. 1969. Correlation between the bio-electric phenomena and the process of oxidative phosphorylation in bird's myocardium (Bulgarian). Comptes Rendus de L'Academie des Sciences 2(3):285-289.

Keywords: oxidative phosphorylation, chicken

Notes: (ONS)

615. Ivanov, V. 1969. Ultrastructural changes in cell mitochondria in chicks infected with Pasteurella multocida (Bulgarian). Nauchni Trudove Vissh Veterinarnomeditsinski Institute "Prof. D-r-G Pavlov" 21:289-298.

Keywords: chicken, ultrastructure, pathogenesis

Notes: Infection of chickens with P.M. caused ultrastructural pathology in cell mitochondria.

616. Ivanova, E.I. and V.P. Golubnichii. 1978. Lack of effect of neomycin and furazolidone on agglutinin formation in fowls infected or immunized against Pasteurella multocida (Russian). Trudy, Belorusskii Nauchno-Issledovatel'skii Institut Eksperimental'noi Veterinarii, Minsk 16:55-60.

Keywords: neomycin, furazolidone, agglutination, vaccine, immunization, antibiotic

Notes: (ONS)

617. Ivanova, E.I., R.V. Tuzova, V.P. Golubnichii and G.G. Kurevich. 1974. Diagnosis of chronic pasteurellosis in hens (Russian). Dostizheniya Veterinarnoi Nauki i Peredovogo Opyta - Zhivotnovodstvu 1:40-43.

Keywords: diagnosis, chicken, carrier

Notes: (ONS)

618. Jacques, M. and B. Foiry. 1987. Electron microscopic visualization of capsular material of Pasteurella multocida types A and D labeled with polycationic ferritin. Journal of Bacteriology 169(8):3470-3472.

Keywords: electron microscopy, capsule, virulence, strain comparison, broth culture, serotype A, serotype D

Notes: The capsular material of P.M. types A and D was morphologically different. Capsule production in broth culture was maximal during early log phase growth.

619. Jaksic, B.L., M. Dordevic and B. Markovic. 1964. Fowl cholera in wild birds (Serbo-Croatian). Veterinarski Glasnik 18:725-730.

Keywords: Yugoslavia, wild bird, pheasant, pigeon, magpie, woodpecker, sparrow hawk, host range, case report

Notes: An outbreak occurred in January 1964 in which over 1,700 pheasants died. P.M. was isolated from pheasants, pigeons, magpies, woodpeckers and sparrow hawks found dead.

620. Janowska, I. and A. Krasnodebska-Depta. 1978. Preliminary studies on the apathogenicity and immunogenicity of a new vaccine "Polivac" against production diseases in poultry (Polish). Medycyna Weterynaryjna 34(9):534-536.

Keywords: vaccine, immunization, Streptococcus zooepidemicus, Escherichia coli, chicken, related bacteria, combined vaccine

Notes: A combined, formalin-inactivated bacterin against several bacterial diseases of poultry is described.

621. Januschke, E. 1915. Fowl cholera in the sparrow hawk (German). Wiener Tierarztliche Monatsschrift 1915:272-273.

Keywords: case report, sparrow hawk, Accipter nisus, hawk, raptor, host range, wild bird

Notes: A case of fowl cholera in the sparrow hawk is reported.

622. Jaslow, B.W., D.H. Ringler, H.G. Rush and J.C. Glorioso. 1981. Pasteurella associated rhinitis of rabbits: efficacy of penicillin therapy. Laboratory Animal Science 31(4):382-385.

Keywords: Oryctolagus, rabbit, rhinitis, antibiotic, treatment

Notes: Results were inconclusive as to whether or not penicillin decreased the prevalence of rhinitis due to P.M. in 30 adult white rabbits.

623. Jasmin, A.M. 1945. An improved staining method for demonstrating bacterial capsules, with particular reference to Pasteurella. Journal of Bacteriology 50:361-363.

Keywords: staining technique, related bacteria, capsule, P.septica, P.mastitidis

Notes: A modified Hiss (1905) staining technique is described that demonstrated bacterial capsules.

624. Jennings, A.R. and E.J.L. Soulsby. 1956. Diseases in wild birds, third report. Bird Study 3(4):270-272.

Keywords: case report, mute swan, Cygnus olor, ecology, host range, wild bird, swan, waterfowl

Notes: Examination of 77 birds to determine the cause of death is reported, including a case of avian cholera in a mute swan.

625. Jennings, A.R. 1955. Diseases in wild birds. Bird Study 2(2):69-72.

Keywords: case report, ecology, red grouse, P.septica, host range, wild bird, grouse

Notes: A total of 224 birds were examined and in 154 a probable cause of death was established, including 4 cases of Pasteurella infection.

626. Jennings, A.R. 1954. Diseases in wild birds. Journal of Comparative Pathology 64:356-359.

Keywords: case report, related bacteria, general, P.pseudotuberculosis, Salmonella gallinarum, P.aviseptica, partridge, host range, wild bird

Notes: The probable cause of death in 112 birds is reported, with 22 cases of bacterial agents found, including Pasteurella spp.

627. Jensen, M.M. 1978. Growth curves and stabilization of fresh vaccine cultures of the Clemson University strain of Pasteurella multocida. Poultry Science 57(3):593-595.

Keywords: culture, special broth TV, culture medium, medium, growth curve, vaccine, isolation

Notes: Growth curves of P.M. were similar in both brain heart infusion broth and "special broth TV."

628. Jensen, W.I. and C.S. Williams. 1964. Botulism and fowl cholera. Waterfowl Tomorrow. U.S. Department of the Interior 333-341.

Keywords: general, ecology, review, signs, transmission, control, wild bird

Notes: General characteristics of avian cholera outbreaks, such as signs, spread of disease, and control, are discussed.

629. Jiang, K.D. 1984. Study on fowl cholera aluminum hydroxide vaccines (Chinese). Journal of Veterinary Science and Technology 9:10-15.

Keywords: vaccine, adjuvant, chicken, immunization

Notes: The effectiveness of P.M. bacterins combined with an alum adjuvant is reported.

630. Joest, E. 1915. Avian cholera in the uhu (Bubo maximum) (German). Beitr. Tierheilk. 1915:11.

Keywords: host range, Bubo maximum, case report, owl, wild bird

Notes: (ONS)

631. Johnson, D.C., P.D. Lukert and R.K. Page. 1980. Field studies with convalescent serum and infectious bursal disease vaccine to control turkey coryza. Avian Diseases 24(2):386-392.

Keywords: immunization, antibody, vaccine, passive immunity, turkey, coryza, infectious bursal disease

Notes: One-day-old poults, given convalescent serum from turkey flocks that had recovered from severe outbreaks of respiratory disease, showed delayed clinical signs of coryza and an improved response to avian cholera vaccination.

632. Jonas, D., K. Haberkorn and C. Commichau. 1986. Contribution to post-mortem diagnosis of rabies in cats (German/E). Tierarztliche Praxis 14(4):527-532.

Keywords: rabies, case report, diagnosis, detection, cat, reservoir

Notes: (ONS)

633. Jones, A.G.H. and J.A. Lockton. 1987. Fatal Pasteurella multocida septicaemia following a cat bite in a man without liver disease. Journal of Infection 15(3):229-235.

Keywords: cat, bite, human, transmission

Notes: Following a cat bite, a fatal septicemia occurred in a 54 year old man with a history of ischemic heart disease, diabetes and rheumatoid arthritis who had received steroids for 13 years. Liver disease, a frequent contributor to lowered resistance permitting Pasteurella bacteremia, was not present in this patient.

634. Jones, C.D.R. 1987. Proliferation of Pasteurella haemolytica in the calf respiratory tract after an abrupt change in climate. Research in Veterinary Science 42:179-186.

Keywords: related bacteria, cattle, respiratory tract, climate, stress, temperature shock, temperature, P.haemolytica

Notes: Calves subjected to an abrupt change in climate after aerosol challenge had raised repiratory rates 8 to 14 hours later and P. haemolytica proliferated in the nasopharynx over 23 hours. There was no effect of climate on growth of the bacterium in the trachea.

635. Jones, H.G.R. and D.M. Owen. 1981. Reproductive tract lesions of the laying fowl with particular reference to bacterial infection. Veterinary Record 108(2):36-37.

Keywords: peritonitis, P.haemolytica, Escherichia coli, reproductive tract abnormality, salpingitis, chicken

Notes: Pure cultures of P.M. were isolated from some cases of reproductive tract abnormalities in breeding flocks. Other bacterial species were also involved.

636. Jones, J.E., W.T. Derieux, B.L. Hughes and J.W. Dick. 1978. Effect of cholera preventative treatments on reproductive performance of turkey hens. Poultry Science 57(2):523-526.

Keywords: immunization, turkey, reproduction, egg production, chlortetracycline, vaccine, secondary effect

Notes: Turkey hens were treated during the growing period with P.M. vaccine, chlortetracycline, P.M. bacterin, or left untreated. The vaccine caused no ill effects and gave 92 percent protection against challenge.

637. Jones, J.E., W.T. Derieux, J.W. Dick and B.L. Hughes. 1977. The effect of vaccinating turkeys with the Clemson University strain of Pasteurella multocida on subsequent reproductive performance and longevity of immunity. Poultry Science 56(6):2013-2015.

Keywords: vaccine, immunization, reproduction, egg production, turkey, duration of immunity, secondary effect

Notes: Vaccination of adult turkey hens afforded protection against avian cholera for up to 28 weeks without adverse effects on reproduction.

638. Jones, R.L., W.S. Adney, M.A. Davis, H. Vonbyren and G. Thompson. 1987. Evaluation of

Quantum II Microbiology System for identification of gram-negative bacteria of veterinary origin. Journal of Clinical Microbiology 25(11):2071-2074.

Keywords: identification, automation, biochemical test, taxonomy

Notes: A rapid, semiautomated bacterial identification system failed to correctly identify P.M.

639. Jordache, A. and C. Ungureanu. 1981. Research on the bacteriocinogenic property in Pasteurella. Archiva Veterinaria 15:51-55.

Keywords: bacteriocin, P.haemolytica, strain comparison, related bacteria, strain

Notes: The study of the bacteriocinogenic property in P.M. and P. haemolytica strains revealed iso- and heteroantagonistic relationships. (This article was also published by the same authors in Archiv fur Experimentelle Veterinarmedizin 3:443-446 1981)

640. Jordache, A., C. Ungureanu, U. Fierlinger, F. Carausu, V. Paduraru, D. Schimmel and P. Kielstein. 1981. Identification of Pasteurella serotypes by indirect hemagglutination (German/E). Archiva Veterinaria 15:57-64.

Keywords: P.haemolytica, antigen isolation, strain comparison, serotyping, hemagglutination, hyaluronidase

Notes: Using the indirect hemagglutination test to compare 54 P.M. strains isolated from cattle and swine, 39 were typed without and 42 with hyaluronidase treatment for antigen preparation.

641. Jordache, A., C. Ungureanu, U. Fierlinger, F. Carausu, V. Paduraru, D. Schimmel and P. Kielstein. 1981. Indirect hemagglutination for identification of Pasteurella serotypes. Archiv fur Experimentelle Veterinarmedizin 35(3):447-452.

Keywords: hemagglutination, antigen isolation, strain comparison, serotyping, hyaluronidase

Notes: Serological identification of 47 P.M. strains was achieved by combined typing using the traditional antigen production and with hyaluronidase treatment of the antigen.

642. Jordache, A. and C. Ungureanu. 1981. Research on the bacteriocinogen properties of Pasteurella. Archiv fur Experimentelle Veterinarmedizin 35(3):443-446.

Keywords: bacteriocin, P.haemolytica, growth, culture, related bacteria, taxonomy

Notes: The bacteriocinogenic activity of 86 Pasteurella strains was found to be taxonomically restricted. Pasteurella haemolytica and P.M. showed a reciprocal growth stimulation. (This article was published by the same authors in Archiva Veterinaria 15:51-55 1981)

643. Jovanovic, V. and B. Tarasenko. 1981. Problems in the artificial rearing of pheasants in Sap Vojvodina. II. Health Problems (Serbo-Croatian/E). Veterinarski Glasnik 35(5):481-488.

Keywords: pheasant, Yugoslavia, avian tuberculosis, case report, host range

Notes: Between 1976 and 1980, 15 percent of 813 dead pheasant chicks from seven Yugoslavian farms had avian cholera.

644. Jun, M.H. and U.I. Chung. 1980. Effects of cyclophosphamide on susceptibility to experimental infection of mice and rabbits with Pasteurella multocida. Korean Journal of Veterinary Research 20(1):45-51.

Keywords: cyclophosphamide, mice, rabbit, susceptibility, resistance, immunosuppression

Notes: (ONS)

645. Juszkiewicz, T. 1967. Experimental Pasteurella multocida infection in chickens exposed to cold: biochemical and bacteriological investigations (Polish/E). Polskie Archiwum Weterynaryjne 10(4):615-625.

Keywords: temperature, cold temperature, chicken, environment, secondary infection, stress

Notes: Chickens exposed to a high (36C) temperature, inoculated with P.M. and transfered to cold (1-2C) temperature, showed increased mortality and a higher rate of secondary infections.

646. Juszkiewicz, T. 1966. Hyperthermia and prednisolone acetate as provocative factors of Pasteurella multocida infection in chickens (Polish/E). Polskie Archiwum Weterynaryjne 10(2):141-151.

Keywords: stress, temperature, prednisolone, immunosuppression, chicken

Notes: Both immune suppression with prednisolone and thermal stress caused chickens to die from otherwise sublethal doses of P.M.

647. Juszkiewicz, T. 1966. Effects of shaking and premedication with methylprednisolone on some biochemical indices associated with Pasteurella multocida infection of cockerels. Polskie Archiwum Weterynaryjne 10(2):129-140.

Keywords: chicken, metabolic change, stress, shaking, immunosuppression, prednisolone

Notes: Infection in chickens was accelerated by stress (40 percent mortality within 24 hours) or immune suppression with prednisolone (62 percent mortality) compared with controls (0 percent mortality).

648. Juszkiewicz, T. 1965. Report on stress. (Spanish/E). Revista Veterinaria Venezolana 19(110):139-160.

Keywords: prednisolone, immunosuppression, chicken, stress, temperature

Notes: The effects of certain stresses on specific diseases are reviewed. Development of infection in chickens with P.M. was accelerated by the use of prednisolone or other stressors.

649. Kajikawa, O. and M. Matsumoto. 1984. A protective antigen for turkeys purified from a type 1 strain of Pasteurella multocida. Veterinary Microbiology 10(1):43-55.

Keywords: antigenic analysis, turkey, strain comparison, antigen isolation, serotype 1, serotype 3, antigen

Notes: A protective antigen purified from a type 1 strain of P.M. was examined for its chemical and immunologic properties. The purified antigen was immunologically distinct from a chemically similar antigen purified from a type 3 strain.

650. Kamp, E.M., P.J. Van der Heijden and B.J. Tetenburg. 1987. Purification of a heat labile dermonecrotic toxin from culture fluid of Pasteurella multocida. Veterinary Microbiology 13:235-248.

Keywords: pathogenesis, serology, toxin, swine, atrophic rhinitis, dermonecrotoxin, vaccine

Notes: A dermonecrotic toxin was purified and used in studying the pathogenesis of atrophic rhinitis and as an antigen to raise a specific antiserum for the development of a suitable serological test.

651. Karaivanov, I. 1971. Isolation and specificity of Pasteurella multocida phage (Bulgarian/E). Veterinarno-Meditsinski Nauki 8(3):43-47.

Keywords: bacteriophage, cofactor, phage typing, strain comparison, Bulgaria, Cuba, phage

Notes: A bacteriophage, phage 115, was isolated from a chicken that died from avian cholera. The phage required calcium and iron ions as cofactors essential for bacterial lysis, and lysed 97 percent of 127 strains of P.M. from Bulgaria and Cuba. Other Pasteurella species were not lysed.

652. Karaivanov, L. 1984. Biochemical tests for identifying of Pasteurella multocida (Bulgarian/E). Veterinarno-Meditsinski Nauki 21(9):38-44.

Keywords: medium, detection, biochemical test, strain comparison, phosphatase activity, sheep, swine, cattle, carrier, chicken

Notes: The biochemical activity of 168 isolates from mammals and birds were compared. Isolates from birds had negative phosphatase activity compared to those from mammals.

653. Karaivanov, L. and L. Kaloyanova. 1984. Metabolism of free amino acids by Pasteurella multocida strains and their subdivision into biological types (Bulgarian/E). Veterinarno-Meditsinski Nauki 21(7/8):38-43.

Keywords: metabolism, biochemical test, strain comparison, amino acid, swine, cattle

Notes: All 29 strains of P.M. (from atypical avian cholera and from swine and calves) metabolized glutaminic acid. Strains from acute avian cholera were the only ones which metabolized proline but not alanine. Only strains from atypical avian cholera metabolized asparagine.

654. Karaivanov, L., L. Kaloyanova and A. Petkov. 1984. Phosphatase activity of Pasteurella multocida strains isolated from birds and mammals(Bulgarian/E). Veterinarno-Meditsinski Nauki 21(1):12-16.

Keywords: biochemical test, phosphatase activity, strain comparison, cattle, swine, rabbit, enzyme

Notes: Phosphatase activity was present in only 8 of 50 avian cholera strains but was present in most strains from cattle, swine and rabbits.

655. Karaivanov, L. 1983. Sensitivity of Pasteurella multocida strains to antibiotics and chemotherapeutic agents (Bulgarian/E). Veterinarno-Meditsinski Nauki 20(9):81-86.

Keywords: inhibitory concentration, antibiotic sensitivity, swine, rabbit, treatment, chicken

Notes: A wide range of antibiotics and chemotherapeutic agents were used for treatment and prophylaxis of birds, based on sensitivity testing.

656. Karaivanov, L. 1982. Isolation, selection and characteristics of Pasteurella multocida bacteriophages (Bulgarian/E). Veterinarno-Meditsinski Nauki 19(1):26-32.

Keywords: bacteriophage, phage mutation, serotyping, phage, isolation

Notes: Genetic mutations in isolated phages were used to select bacteriophages suitable for phage typing of P.M. isolates.

657. Karaivanov, L., M. Bonovska and P. Todorova. 1981. On the nucleotide composition of Pasteurella multocida strains (Bulgarian/E). Veterinarno-Meditsinski Nauki 18(8):41-46.

Keywords: DNA, strain comparison, chicken, cattle

Notes: The values of the nucleotide bases were established for individual groups of Pasteurella strains using spectrophotometric comparisons.

658. Karaivanov, L., P. Koleva and M. Yurkov. 1981. Streptomycin-dependent mutants of Pasteurella multocida strains of avian origin (Bulgarian/E). Veterinarno-Meditsinski Nauki 18(6):20-26.

Keywords: strain comparison, serotyping, mutant, streptomycin resistance, immunity

Notes: A total of 16 avirulent, streptomycin-resistant mutant strains were obtained by growth in streptomycin-containing medium.

659. Karaivanov, L. 1979. Study on decarboxylase activity of Pasteurella multocida (Bulgarian/E). Veterinarno-Meditsinski Nauki 16(7):49-53.

Keywords: decarboxylase activity, swine, rabbit, chicken, Cuba, USSR, Bulgaria, Czechoslovakia, enzyme, strain comparison

Notes: Among 218 strains from birds, swine and rabbits, procured from Bulgaria, Czechoslovakia, Cuba and USSR, 211 possessed ornithine decarboxylase activity. Only a few showed a low degree of arginine and lysine decarboxylase activity.

660. Karaivanov, L. and G. Popov. 1977. Electron-microscopic studies on Pasteurella multocida bacteriophages (Bulgarian/E). Veterinarno-Meditsinski Nauki 14(9):33-36.

Keywords: phage, ultrastructure, electron microscopy, bacteriophage, hemorrhagic septicemia

Notes: The ultrastructure of four phages (115, 967, 32 and 1075) of P.M. is described.

661. Karaivanov, L. 1977. Adsorption of Pasteurella multocida bacteriophages. Veterinarno-Meditsinski Nauki 14(1):3-10.

Keywords: bacteriophage, adsorption kinetics, Bulgaria, phage

Notes: The adsorption kinetics of P.M. bacteriophages is suggested as a taxonomic characteristic for the classification of such bacteriophages.

662. Karaivanov, L. 1976. The phenomenon of lysogeny with Pasteurella multocida (Bulgarian/E). Veterinarno-Meditsinski Nauki 13(5):26-31.

Keywords: bacteriophage, lysogeny, strain comparison, phage, isolation, Bulgaria, Cuba, Czechoslovakia

Notes: Twelve different bacteriophages were isolated from 11 of 59 strains of P.M. from Bulgaria, Cuba and Czechoslavakia. One bacterial isolate yielded two phages.

663. Karaivanov, L. 1976. Effect of physical and chemical factors on Pasteurella multocida phages (Bulgarian/E). Veterinarno-Meditsinski Nauki 13(4):65-72.

Keywords: bacteriophage, phage, phage culture, phage inactivation

Notes: Thermal inactivation of nine bacteriophages began at 48C and was linear through 65C. Inactivation of phages by urea, sodium citrate and a variety of strains is described. A broth medium at pH 7.5 was optimum for growth of P.M. phages.

664. Karaivanov, L. 1974. Study on Pasteurella multocida strains isolated from animals in Cuba (Bulgarian/E). Veterinarno-Meditsinski Nauki 11(3):69-72.

Keywords: rabbit, cattle, Cuba, bacteriophage, phage typing, chicken, swine, strain comparison, phage

Notes: Fermentation characteristics and phage 115 lysis were studied for 16 strains of P.M. isolated in Cuba.

665. Karaivanov, L. and O. Mraz. 1973. Use of phagodiagnostics in Pasteurella multocida. Acta Veterinaria Brno 42(2):195-200.

Keywords: classification, bacteriophage, phage

Notes: It was useful to use a monovalent phage in parallel with cultural and biochemical tests for correct Pasteurella species identification.

666. Karaivanov, L., T.S. Tsonev and V. Feodorov. 1972. Study on the changes in Pasteurella multocida strains after treatment with streptomycin (Bulgarian/E). Veterinarno-Meditsinski Nauki 9(2):53-60.

Keywords: mutant, antibiotic resistance, virulence, biochemical test, ultrastructure, chicken, mice, streptomycin resistance

Notes: Streptomycin-resistant strains of P.M. were produced by exposure to increasing levels of the antibiotic following primary isolation of the bacterium from chickens. The mutant strains were avirulent to mice and showed alterations in ultrastructure and fermentative ability.

667. Karaivanov, L., P. Koleva and K. Rashkova. 1972. Antagonistic activity of an Alcaligenes brochisepticus strain toward Pasteurella multocida (Bulgarian/E). Veterinarno-Meditsinski Nauki 9(10):99-104.

Keywords: inhibition, antibiotic, Alcaligenes bronchisepticus, Bulgaria, Cuba, Czechoslovakia, strain comparison

Notes: A strain of Alcaligenes bronchisepticus showed an inhibitory effect on most strains of P.M. from Bulgaria, Cuba and Czechoslovakia. The inhibitory effect was not related to the host source of the P.M. strains tested, and was seen only on solid medium, reaching its peak on the fifth day of culture.

668. Karaivanov, L. 1970. On the dehydrogenase (reductase) activity of Pasteurella multocida (Bulgarian/E). Veterinarno-Meditsinski Nauki 7(9):67-72.

Keywords: enzyme, strain comparison, mammal, dehydrogenase, Bulgaria, Cuba, chicken

Notes: The dehydrogenase activity of 94 strains isolated from birds and mammals in Bulgaria and Cuba was studied. No differences in enzyme activity were found between strains isolated from different host species.

669. Karmy, S.A., S.A. El-Hamed, A.A. Fayed and M.A. El-Ghani. 1983. Studies on Pasteurella multocida in domesticated animals and birds in Asswan Governate. Journal of the Egyptian Veterinary Medical Association 43:91-100.

Keywords: case report, Egypt, swine, cattle, chicken

Notes: (ONS)

670. Kaschula, V.R. and D.E. Truter. 1951. Fowl cholera in sea gulls on Dassen Island. Journal of the South African Veterinary Medical Association 22(4):191-192.

Keywords: southern black-backed gull, case report, gull, Larus dominicanus, chicken, pigeon, guinea pig, South Africa, transmission, Egyptian goose, Alophochen aegyptiacus, host range, P.aviseptica

Notes: Mortality of sea gulls (Larus dominicanus) due to P. aviseptica on a South African island is discussed in relationship to outbreaks in poultry flocks on the mainland.

671. Kashirin, V.V. 1986. Serological typing of field and industrial avian strains of Pasteurella multocida according to thermostable somatic antigen (Russian). Izv. Sev-Kavk.Nauchn. Tsentra.Vyssh. Shk. Estestv. Nauki 3:125-128.

Keywords: serotyping, somatic antigen, agar gel immunodiffusion, serotype 1, vaccine, immunization, strain comparison

672. Kasian, G.G. and K.P. Chepurov. 1965. The study of methods of obtaining pasteurellosis vaccines (Russian). Veterinariya (Moscow) 1:25-27.

Keywords: vaccine, immunization

Notes: A brief review of avian cholera vaccines is presented.

673. Kaupp, B.F. 1913. Blood diseases of birds. American Journal of Veterinary Medicine 8:587-590,-623.

Keywords: septicemia, bacteremia, Streptococcus gallinarum

Notes: Blood diseases caused by bacteria that live and multiply in the blood stream are discussed.

674. Keahey, E.E. 1971. A look at fowl cholera. Southwestern Veterinarian 24(3):211.

Keywords: control, treatment, transmission, review

Notes: The epidemiology, etiology and control of avian cholera are briefly discussed.

675. Kelley, K.W. 1980. Stress and immune function: a bibliographic review. Annales de Recherches Veterinaires 11(4):455-478.

Keywords: review, stress, immunity

Notes: As part of this review, the influence of environmental stressors on infection with P.M. are discussed.

676. Kemenes, F., I. Szecsenyi and I. Dozsa. 1965. Experimental testing of the susceptibility of the pheasant for Pasteurella tularensis and P. multi-(avi)-septica (Hungarian/E). Magyar Allatorvosok Lapja 20(6):270-272.

Keywords: Phasianus colchicus torquatus, P.multiseptica, P.aviseptica, P.septica, P.tularensis, pheasant, tularemia, susceptibility, host range

Notes: The pheasant was shown to be moderately susceptible to P. tularensis and Pasteurella multoaviseptica.

677. Kemeny, A. 1975. Methods and results of fowl cholera control (Hungarian). Baromfitenyesztes 19(6):6-7.

Keywords: control, treatment, chicken

Notes: A short review of methods for the control of avian cholera is presented.

678. Keymer, I.F. 1972. Diseases of birds of prey. Veterinary Record 90:579-594.

Keywords: case report, raptor, Falconiformes, Strigiformes, host range

Notes: The analysis of 125 post-mortem examinations of mainly captive birds in the orders Falconiformes and Strigiformes showed no avian cholera was found.

679. Keymer, I.F. 1958. A survey and review of the causes of mortality in British birds and the significance of wild birds as disseminators of disease. Veterinary Record 70(36):713-720.

Keywords: case report, P.aviseptica, wild bird, tufted duck, carrion crow, blackbird, robin, starling, tapeworm, lice, host range, Britain, duck, crow, waterfowl

Notes: A survey was made of the causes of mortality based on postmortem examination of 513 British birds and included included five cases of avian cholera in wild birds.

680. Khainitski, R.M. and V.F. kravchenko. 1971. The role of wild birds in spreading pasteurellosis to poultry (Russian). Veterinarya (Moscow) 1:57-58.

Keywords: wild bird, transmission, chicken, reservoir

Notes: The potential role of wild birds as reservoirs of infection is reported.

681. Khalil, G.M. 1979. The subgenus Persicargas (Ixodoidea:Argasidae:Argas) 31. The life cycle of A.(P.) persicus in the laboratory. Journal of Medical Entomology 16(3):200-206.

Keywords: tick, reservoir, vector, Argas persicus, pigeon, parasite

Notes: Baseline data on the life cycle of Argas persicus were obtained using pigeons as hosts.

682. Khalyapina, E.E., S.A. Lebedeva, G.G. Gurleva, I.V. Domaradsky and E.G. Grygoryan. 1972. Antibiotic sensitivity and transference of R-factor to Pasteurella multocida (Russian/E). Antibiotiki 17(4):336-339.

Keywords: antibiotic, plasmid, conjugation, antibiotic resistance, R-factor

Notes: Strains of P.M. that acquired R-factor were capable of being donors of episomic, multiple drug resistance.

683. Khan, M.S. and S.E. Stead. 1979. Neonatal Pasteurella multocida conjunctivitis following zoonotic infection of mother. Journal of Infection 1:289-290.

Keywords: zoonosis, man, host range, dog, cat, conjunctivitis, transmission

Notes: A case is reported in which the maternal infection was initially subclinical leading to postpartum septicemia and neonatal conjunctivitis.

684. Khashimov, A.U. 1979. Hygienic measures for preventing poultry diseases (survival of Pasteurella multocida and salmonellae in Uzbekistan) (Russian). Veterinariya (Moscow) 5:28-30.

Keywords: climate, spraying, sanitation, prevention, Uzbekistan, Salmonella

Notes: Survival of P.M. outside the host and subsequent disinfection of infected premises with iodine monochloride and formaldehyde is described.

685. Khashimov, A.U. 1976. Veterinary hygenic measures for large poultry units (with reference to the survival of Pasteurella multocida and Salmonella) (Russian). Problemy Veterinarnoi Sanitarii 54:80-86.

Keywords: survival, disinfection, sanitation, Salmonella, prevention

Notes: Standard methods for sanitation on poultry farms are reviewed.

686. Khashimov, A.U. 1972. Survival rate of the avian pasteurellosis agent in different materials at various times of year in the Uzbek SSR. I, II, III (Russian). Trudy Uzbekskogo Nauchno-Issledovatel'skogo Veterinarnogo Institut 20:309-310,-311-314.

Keywords: survival, asphalt, concrete, environment, disinfection

Notes: The survival of avian strains of P.M. on materials such as asphalt and concrete is reviewed.

687. Khashimov, A.U. 1972. Biothermal disinfection of poultry droppings contaminated with Pasteurella (Russian). Veterinariya (Moscow) 8:35-37.

Keywords: disinfection, manure, chicken, inactivation, temperature, survival, composting

Notes: Various methods of composting fowl manure and sawdust to kill Pasteurella in 10-25 days are described.

688. Khewish, Y.A. and K.A. Khalifa. 1985. Extraction of some antigenic components from Pasteurella multocida with special reference to its immunogenicity (Arabic). Journal of Biological Science Research 16(2):89-102.

Keywords: antigen, antigen isolation, immunogenicity, vaccine

Notes: (ONS)

689. Khogali, A.R. 1975. The isolation of bacteria and fungus from respiratory system of the fowl in Sudan. Bulletin of Animal Health and Production in Africa 23(3):349-352.

Keywords: Sudan, case report, chicken, Africa, respiratory tract

Notes: (ONS)

690. Kielstein, P., P. Heilmann and T. Magyar. 1987. Pasteurella multocida as causal agent of atrophic rhinitis: importance of dermonecrotoxin in the baby mouse test as well as in vitro demonstration of adhesion properties (German/E). Journal of Veterinary Medicine, Series B 34:216-226.

Keywords: Bordetella bronchiseptica, swine, adherence, toxin, dermonecrotoxin, mice, pathogenesis, related bacteria

Notes: P.M. and Bordatella bronchiseptica strains isolated from pigs and dermatotoxins obtained from the bacterial strains were examined in the baby mouse and adhesion tests for the presence of colonization factors.

691. Kielstein, P. and D. Schimmel. 1986. Typing, toxin formation and virulence of Pasteurella multocida strains from respiratory organs of swine and calf (German). Monatshefte fur Veterinarmedizin 41(16):563-565.

Keywords: cattle, swine, virulence, respiratory tract, serotyping, strain comparison

Notes: Strains of P.M. isolated from the respiratory tract of swine and calves were compared by several criteria.

692. Kielstein, P., H. Hoffmann, M. Worseck and D. Schimmel. 1983. Use of macrolide antibiotics for treatment of dysentary and pneumonia of swine (German/E). Monatshefte fur Veterinarmedizin 38(22):847-851.

Keywords: treatment, antibiotic, macrolide antibiotic, turymycin, tylosin, antibiotic sensitivity, swine, cattle, goat, strain comparison

Notes: The sensitivity to turimycin and tylosin of 274 freshly isolated porcine, bovine, ovine and avian strains of 12 bacteria was tabulated.

693. Kielstein, V.P., H. Bocklisch and G. Orthey. 1986. Pasteurella multocida - pathogen of infectious atrophic rhinitis of swine. Monatshefte fur Veterinarmedizin 41(2):46-50.

Keywords: atrophic rhinitis, swine, Bordetella bronchiseptica, related bacteria, serotype A, serotype D

Notes: Experimental infection of swine revealed similarities between P.M. and Bordatella bronchiseptica.

694. Kimman, T.G, C.W.G.M. Lowik, L.J.A. VandeWee-Pals, C.W. Thesingh, P. Defize, E.M. Kamp and O.L.M. Bijvoet. 1987. Stimulation of bone resorption by inflamed nasal mucosa, dermonecrotic toxin-containing conditioned medium from Pasteurella multocida, and purified dermonecrotic toxin from P.

multocida. Infection and Immunity 55(9):2110-2116.

Keywords: dermonecrotoxin, toxin, atrophic rhinitis, pathogenesis, related bacteria, Bordetella bronchiseptica, swine

Notes: Dermonecrotic toxin from P.M. stimulated osteoclastic bone resorption and was involved in the pathogenic mechanism of atrophic rhinitis.

695. Kirchner, C. and A. Eisenstark. 1956. Lysogeny in Pasteurella multocida. American Journal of Veterinary Research 17(64):547-548.

Keywords: chicken, bacteriophage, lysogeny, phage

Notes: Evidence for lysogenic phages was found in 11 of 25 P.M. isolates from chickens with avian cholera. The phages could be classified into five groups on the basis of host range and plaque morphology.

696. Kiser, J.S., J. Prier, C.A. Bottorff and L.M. Greene. 1948. Treatment of experimental and naturally occurring fowl cholera with sulfamethazine. Poultry Science 27(3):257-262.

Keywords: antibiotic, sulfonamide, sulfamethazine, chicken, treatment

Notes: Sulfamethazine or sodium sulfamethazine reduced the mortality from avian cholera in artificially infected chicks up to 83 percent.

697. Klaassen, J.M., B.L. Bernard and R.F. DiGiacomo. 1985. Enzyme-linked immunosorbent assay for immunoglobulin G antibody to Pasteurella multocida in rabbits. Journal of Clinical Microbiology 21(4):617-621.

Keywords: antigen, rabbit, lipopolysaccharide, antigen isolation, antibody, serology, ELISA, enzyme-linked immunosorbent assay, immunoglobulin G

Notes: The use of a boiled-cell extract antigen was superior to lipopolysaccharide antigen or boiled whole-bacterin antigen in an ELISA to detect rabbit immunoglobulin antibody to P.M.

698. Klaiman, A.P., W. Victery, M.J. Kluger and A.J. Vander. 1981. Urinary excretion of zinc and iron following acute injection of dead bacteria (Pasteurella multocida) in dog. Proceedings of the Society for Experimental Biology and Medicine 167(2):165-171.

Keywords: dog, iron, zinc, excretion, pathology, host physiology

Notes: (ONS)

699. Kluger, M.J. and B.A. Rothenburg. 1979. Fever and reduced iron: their interaction as a host defense response to bacterial infection. Science 203(4378):374-376.

Keywords: medium, fever, iron, resistance, rabbit, temperature, growth

Notes: The concentration of iron in the serum of P.M. infected rabbits is inversely related to rectal temperature. In vitro studies showed that, at afebrile temperatures, the bacteria grew equally well at low or high concentrations of iron. At higher temperatures, bacterial growth was inhibited by low, but not high, iron concentrations.

700. Kluger, M.J. and L.K. Vaughn. 1978. Fever and survival in rabbits infected with Pasteurella multocida. Journal of Physiology 282:243-251.

Keywords: fever, virulence, survival, rabbit, pathogenesis

Notes: Fevers of up to 2.25 degrees Centigrade increased survival. Fevers above this level were associated with a decreased survival. Antipyretic drugs failed to decrease the fever, but rabbits injected with them had a lower mortality. Growth of P.M. in culture at normal and febrile temperatures was not significantly different.

701. Klukas, R.W. and L.N. Locke. 1970. An outbreak of fowl cholera in Everglades National Park. Journal of Wildlife Diseases 6:77-79.

Keywords: case report, lesser scaup, Aythya affinis, blue-winged teal, Anas discors, Fulica americana, Everglades National Park, wild bird, scavenger, ring-necked duck, Aythya collaris, American widgeon, Mareca americana, host range, teal, duck, waterfowl

Notes: The occurance of avian cholera, mainly among coots, in Everglades National Park was recorded.

702. Knezevic, N. 1971. Pathomorphological picture and differential diagnosis of the atypical fowl cholera (Serbo-Croatian). Peradarstvo 6(5):3-5.

Keywords: diagnosis, pathology, chicken

Notes: The gross pathology and criteria for diagnosis of atypical avian cholera are briefly given.

703. Knight, D.P., J.E. Paine and D.C.E. Speller. 1983. A selective medium for Pasteurella multocida and its use with animal and human

species. Journal of Clinical Pathology 36(5):591-594.

Keywords: selective medium, culture, diagnosis, detection, antibiotic, clindamycin, gentamycin, potassium tellurite, amphotericin B, medium, dog, cat, man, P.pneumotropica

Notes: A selective medium (CGT medium) containing antibiotics and five percent horse blood agar allowed growth of almost all strains of P.M. and *Pasteurella pneumotropica* while inhibiting other bacteria.

704. Kobakhidze, T.L. 1965. Study of measures for controlling avian pasteurellosis in the Georgian SSR (Georgian). Soobshchenya Akademii Nauk Gruzinskoi SSR 39(1):173-177.

Keywords: vaccine, prevention, sanitation, USSR, Georgian SSR

Notes: An examination of control procedures is briefly given.

705. Kocjan, L. 1935. Bolezni golobov v. severnih krajih jugoslavije s posebnim ozirom na enzootska paratifozna obolenja (fowl cholera) (Serbo-Croatian). Jugoslavenska Veterinarski Glasnik 15:67-77.

Keywords: Yugoslavia, chicken

Notes: (ONS)

706. Kodama, H., M. Matsumoto, J.I. Fuquay and B. Syuto. 1983. Soluble fractions of *Pasteurella multocida*: their protective qualities against fowl cholera in turkeys. Avian Diseases 27(1):283-291.

Keywords: serotyping, endotoxin, toxin, antigen, turkey, antigen isolation

Notes: Immunogenicity of extracted soluble fractions of P.M. were evaluated by challenge exposure in turkeys. An antigen was found that was previously shown to be a surface-protective antigen.

707. Kodama, H., M. Matsumoto and L.M. Snow. 1981. Immunogenicity of capsular antigens of *Pasteurella multocida* in turkeys. American Journal of Veterinary Research 42(10):1838-1841.

Keywords: vaccine, immunization, antigen, capsular antigen

Notes: Capsular antigens were isolated from P.M., and their immunogenicity was tested in turkeys. The results indicated that the surface antigen isolated from P.M. by saline extraction was immunogenic in young adult turkeys.

708. Kodrnja, E., B. Tunkl and Z. Romic. 1965. Simultaneous immunization of poultry with Newcastle and fowl cholera vaccines (Serbo-Croatian). Vijesti Serum 13(7/8):275-278.

Keywords: combined vaccine, Newcastle disease, chicken, duration of immunity

Notes: Simultaneous immunization of chickens with Newcastle disease and avian cholera vaccines did not affect the intensity or the duration of immunity to either disease.

709. Korschgen, C.E., H.C. Gibbs and H.L. Mendall. 1978. Avian cholera in eider ducks in Maine. Journal of Wildlife Diseases 14(2):254-258.

Keywords: eider, Somateria mollissima dresseri, case report, carrier, environment, host range, duck, waterfowl, wild bird, Maine

Notes: Studies over a seven-year period showed that among eider ducks over 90 percent of the loss from avian cholera occurred in incubating females. A small number of carrier birds was found.

710. Koturanov, P.N. 1966. Influence of feed terramycin and strain-2377 on immunity in chickens with pseudo-pest and pasteurellosis disease (Russian). Veterinariya (Moscow) 12:18-20.

Keywords: antibiotic, chicken, terramycin, immunity, immunosuppression

Notes: The possible influence on immunity of feeding terramycin to chickens was described.

711. Kouwenhoven, B., E. Goren and F.G. Davelaar. 1976. A case of fowl cholera (*Pasteurella multocida*) in six-week-old broilers (Dutch/E). Tijdschrift voor Diergeneeskunde 101(15):855-858.

Keywords: joint, heart, liver, kidney, isolation, detection, Netherlands, case report, chicken, arthritis, chloramphenicol, antibiotic, treatment

Notes: An outbreak of avian cholera in a flock of 6,000 six-week-old broilers is reported.

712. Kozhevnikov, E.M. 1974. Localization of *P. multocida* in the body of fowls (Russian). Veterinariya (Moscow) 1:59-61.

Keywords: pathogenesis, antibiotic, tissue level, detection

Notes: The effect of antimicrobial therapy on the localization of P.M. in body tissues was studied.

713. Kozhevnikov, E.M. 1973. Establishment of a carrier state in avian pasteurellosis (Russian). Veterinariya (Moscow) 8:45-46.

Keywords: chicken, reservoir, carrier, transmission

Notes: The establishment and detection of carrier birds in a chicken flock is described.

714. Kozhevnikov, E.M. 1972. Role of flies in spreading fowl cholera (Russian). Veterinariya (Moscow) 10:82-83.

Keywords: fly, vector, transmission, control, Harvivoridae

Notes: The potential for flies to act as a vector for P.M. is discussed.

715. Kozhevnikov, E.M. 1971. Localization of Pasteurella multocida in the organism of poultry affected with pasteurellosis (Russian). Veterinarya 2:106-107.

Keywords: chicken, pathogenesis, location

Notes: The location of P.M. in the tissues of chickens is reported.

716. Kozhevnikov, E.M. and P.M. Dmitrieva. 1966. Continuance of conservation for pasteurellosis causative agent in frozen meat of poultry (Russian). Trudy Vsesoyuznogo Instituta Eksperimental'noi Veterinarii 32:131-132.

Keywords: survival, meat, carcass

Notes: (ONS)

717. Kozhurin, V.M. 1973. Effect of ultraviolet irradiation on the air microflora of fowl houses, and the effects of varying radiation doses on the pathogenicity of Salmonella gallinarum, Pasteurella multocida, and Escherichia coli (Russian). Sbornik Trudov VsesoyuznyiNauchno-issledovatel'skiiInstitut po Boleznyam Ptits 9:261-266.

Keywords: ultraviolet light, sanitation, survival, related bacteria, Salmonella gallinarum, Escherichia coli

Notes: (ONS)

718. Krecov, M.I. 1976. Examination of the role of the route of infection and nonspecific factors in the appearance of fowl cholera. Acta Veterinaria (Belgrade) 26(1):33-46.

Keywords: transmission, portal of entry, pathogenesis

Notes: Infectivity was compared for natural routes of transmission and experimental injection of P.M.

719. Krinsky, W.L. 1976. Animal disease agents transmitted by horse flies and deer flies (Diptera: Tabanidae). Journal of Medical Entomology 13(3):225-275.

Keywords: Tabanidae, Tabanus rubidus, Tabanus striatus, Chrysops dispar, vector, hemorrhagic septicemia, buffalo sickness, transmission, fly

Notes: Report of fly-borne transmission of pathogenic agents (including P.M.) of animals.

720. Kucera, C.J., J.C.S. Wong and R.L. Eis. 1981. Development of a chemically altered Pasteurella multocida vaccinal strain. American Journal of Veterinary Research 42(8):1389-1394.

Keywords: cattle, swine, sheep, immunization, mice, hamster, vaccine

Notes: The vaccine afforded calves, swine and sheep protection, while a high degree of protection was elicited in mice and hamsters, comparing favorably with reference bacterin standards.

721. Kucsera, G. 1981. Antigenic structure of Pasteurella multocida and its serotypes (Hungarian). Magyar Allatorvosok Lapja 36(10):651-654.

Keywords: review, Hungary, strain comparison, antigen, agglutination, agar gel immunodiffusion

Notes: A review is made of antigen classification schemes as developed using indirect agglutination, agglutination, and immunoprecipitation.

722. Kuklich, V.K. 1987. Carriers of Pasteurella and Escherichia among Muscovy ducks, Cairina moschata (Russian). Veterinariya (Kiev) 62:62-63.

Keywords: carrier, muscovy, detection, related bacteria, Escherichia, culture, transmission, pekin, duck

Notes: (ONS)

723. Kumar, O.R.M. and O. Sreemannaryana. 1978. Drug trials against fowl cholera in poultry. Poultry Adviser 11(9):61-62.

Keywords: antibiotic, treatment, chicken

Notes: (ONS)

724. Kume, K. and T. Nakai. 1985. Dissociation of Pasteurella multocida dermonecrotic toxin into three polypeptide fragments. Japanese Journal of Veterinary Science 47(5):829-833.

Keywords: toxin, swine, serotype D, protein, dermonecrotoxin, polypeptide fragment

Notes: Treatment of trypsinized dermonecrotic toxin with dithiothreitol and sodium dodecyl sulfate produced three polypeptide chains.

725. Kyaw, M.H. 1944. Pathogenesis of Pasteurella septica infection in developing chick embryo. Journal of Comparative Pathology 54:200-206.

Keywords: pathogenesis, P.septica, chick embryo, pathology

Notes: An experiment was done to study the pathogenesis of a strain of P. septica in chick embryos.

726. Lalakes, G. 1977. Fowl cholera (Greek/E). Hellenic Veterinary Medicine 20(2):97-99.

Keywords: review, isolation, Greece, chicken, pathology, identification

Notes: The isolation and identification of P.M. and the clinical and pathological aspects of the disease are described.

727. Lamont, S.J., C. Bolin and N. Cheville. 1987. Genetic resistance to fowl cholera is linked to the major histocompatibility complex. Immunogenetics 25(5):284-289.

Keywords: genetic, histocompatibility complex, chicken, resistance

Notes: (ONS)

728. Langenegger, J., L.M.Q. Marques and N.M. Coelho. 1973. Enzootic pasteurellosis in rabbits (Portuguese/E). Pesquisa Agropecuaria Brasileira, Serie Veterinaria 8:69-72.

Keywords: rabbit, respiratory tract, nasal passage, carrier, Brazil

Notes: Carrier rabbits were found in 4 of 13 farms examined around Rio de Janeiro, with an incidence of 30.8 percent in the contaminated farms. Isolation of the bacterium was most successful from the nasal passages.

729. Langford, E.V. 1974. Acholeplasma laidlawii and Pasteurella multocida isolated from the pneumonic lung of a lynx. Journal of Wildlife Diseases 10:420-422.

Keywords: case report, Acholeplasma laidlawii, mycoplasma, lynx, Lynx canadensis, host range

Notes: Acholeplasma laidlawii and P.M. were recovered from the pneumonic lungs taken from a lynx (Lynx canadensis) that had been shot.

730. Langpap, T.J. and P.H. Matisheck. 1970. Observations on the prevalence of avian Pasteurella multocida serotypes. Avian Diseases 14(3):491-493.

Keywords: serotyping, immunization, vaccine, turkey, chicken

Notes: The applicability of Heddleston's typing procedure was shown and the results of serotyping over 14 months are given.

731. Lantos, C. 1977. Measures to control fowl cholera (Czechoslovakian). Kistenyesztok Lapja 4(9):7.

Keywords: control, treatment, antibiotic, chicken

Notes: A very short review of avian cholera control measures are given.

732. Larson, C.L., W. Wicht and W.L. Jellison. 1955. A new organism resembling P. tularensis isolated from water. Public Health Reports 70(3):253-258.

Keywords: Ogden Bay Wildlife Refuge, related bacteria, muskrat, water, P.novicida, host range, carrier

Notes: A highly pathogenic organism was isolated from water taken from the Ogden Bay Bird Refuge in Utah. It was similar in appearance to P. tularensis and was tentatively named P. novicida.

733. Laval, A. 1986. Pasteurellosis of domestic animals, excluding carnivores (French). Medecine et Maladies Infectienses 16:10-17.

Keywords: review, chicken, cat, dog, cattle, swine

Notes: (ONS)

734. Layton, H.W and T.S. Sandhu. 1984. Protection of ducklings with a broth-grown Pasteurella anatipestifer bacterin. Avian Diseases 28(3):718-726.

Keywords: duck, vaccine, related bacteria, P.anatipestifer, immunization

Notes: Field studies on Long Island duck farms in 1980 and 1981 demonstrated significant reductions in mortality with the use of a broth-grown bacterin prepared from three serotypes of P. anatipestifer given in two subcutaneous injections.

735. Layton, H.W. 1984. Efficacy of broth-grown Pasteurella multocida bacterins in ducklings. Avian Diseases 28(4):1086-1095.

Keywords: vaccine, immunization, duck, culture, adjuvant

Notes: Immunization of ducklings with broth-grown bacterins resulted in less mortality than in unimmunized controls after homologous challenge.

736. Lebedeva, A.I., A.N. Borisenkova and R. Mukhamedshin. 1973. Mixed infection with Pasteurella multocida and Escherichia coli in fowls (Russian). Veterinariya (Moscow) 12:58-60.

Keywords: chicken, Escherichia coli, double infection

Notes: Chickens were diagnosed as having a double-infection with P.M. and Escherichia coli.

737. Lee, Y.C., B.H. Fang and L.C. Weng. 1982. The prophylactic efficacy of natural zeolite powder against chicken fowl cholera (Chinese/E). National Science Council Monthly, Republic of China, Proceedings 10(6):568-572.
Keywords: treatment, prevention, antibiotic, zeolite, adsorption, chicken, vaccine, bacitracin

Notes: Chickens given feed containing 5 percent zeolite powder for more than 12 days survived oral challenge with P.M. better than chickens given bacitracin (55ppm) in feed. Zeolite powder adsorbed a heavy suspension of bacteria within 2 hours.

738. Lee, Y.C., F.F. Hsieh and W.M. Hong. 1974. The prophylactic and therapeutic effects of Daimeton on fowl cholera in ducks. Taiwan Journal of Veterinary Medicine and Animal Husbandry 25:47-54.

Keywords: treatment, duck, prophylaxis, sulfonamide, sulfamonomethoxine monohydrate, sulfamonomethoxine sodium, sulfamonomethoxine, antibiotic

Notes: Sulfamonomethoxine monohydrate (Diameton B 20) for injection and a water soluble preparation of sulfamonomethoxine sodium (Daimeton soda) for administration in drinking water were effective in reducing mortality.

739. Leonchuk, S.I. and P.P. Tsimokh. 1976. Immunobiological changes in chicks vaccinated with emulsified pasteurellosis vaccines (Ukranian). Veterinariya (Kiev) 43:36-39.

Keywords: chicken, immunity, immunization, antibody titer, serum protein, antibody

Notes: Two intramuscular injections of an emulsified vaccine given a week apart resulted in an increase in serum gamma-globulins and gave stronger and more lasting immunity than subcutaneous injection.

740. Leonchuk, S.I. 1975. Effect of lyophilization and storage on a vaccine strain of Pasteurella multocida (Ukranian). Veterinarya (Kiev) 41:46-48,116.

Keywords: lyophilization, storage, vaccine, temperature

Notes: The effect of lyophilization and conditions of storage on a vaccine strain of P.M. are discussed.

741. Li, W.Y., W.H. Xu, M.G. Cai and F.B. Ju. 1982. Aerosol vaccination against fowl cholera in chickens with a live vaccine prepared from Pasteurella multocida strain 731 (Chinese). Chinese Journal of Veterinary Medicine 8(7):44-46.

Keywords: vaccine, immunization, chicken, aerosol

Notes: Immunization of chicken using aerosol delivery of the vaccine is presented.

742. Lin, S.t., Y.Y. Chen and P. Chen. 1984. Safety and immunogenicity of Pasteurella multocida capsular polysaccharide-protein complex in ducks (Chinese). Journal of Veterinary Science and Technology 12:17-21.

Keywords: vaccine, immunization, capsular antigen, duck, lipopolysaccharide

Notes: (ONS)

743. Linde, K. 1982. Experimental studies in a mouse model with attenuated mutants of a Pasteurella multocida strain pathogenic for calves. 5. Spontaneous chromosomal resistance to antibiotics -- a possibility to isolate virulence- attenuated clones (German/E). Archiv fur Experimentelle Veterinarmedizin 36(5):647-656.

Keywords: mice, vaccine, mutant, antibiotic, antibiotic resistance, ribonucleic acid polymerase, rifampicin, ribosome, virulence, RNA, nalidixic acid, oleandomycin, lincomycin, erythromycin

Notes: Spontaneous mutants of ribonucleic acid polymerase (with resistance to rifampicin), gyrase (with resistence to nalidixic acid) and ribosomes (with resistance to oleandomycin, lincomycin, and erythromycin) of P.M. were tested for virulence in a mouse model.

744. Linde, K. 1977. Experimental studies on a mouse model with attenuated mutants of a Pasteurella multocida strain with pathogenicity to calves. 3. Isolation and biological characterization of temperature-sensitive mutants and testing of their immunogenicity in comparison to streptomycin-dependent germs (German/E). Archiv fur Experimentelle Veterinarmedizin 31(4):503-512.

Keywords: mutant, immunization, temperature-sensitive mutant, virulence, isolation, streptomycin dependance

Notes: Isolation, virulence and immunogenicity studies were done on temperature-sensitive mutants and temperature-resistant revertants of a P.M. strain.

745. Linde, K. and H.P. Keller. 1976. Mouse model for experimental studies into attenuated mutants of a Pasteurella multocida strain with pathogenicity for calves. 2. Primary immunization against lethal infection, using fully attenuated streptomycin-dependent (SM-D) mutant, and booster immunization, using partially attenuated streptomycin-dependent (SM-D) revertant (German/E). Archiv fur Experimentelle Veterinarmedizin 30(6):845-851.

Keywords: immunization, mutant, streptomycin dependance, cattle, vaccine, mice

Notes: Protection against a lethal dose of the wild strain could be acheived by two immunizations: a primary antigen application using fully attenuated streptomycin-dependent mutant and a booster immunization using both fully and partially attenuated mutants.

746. Linde, K. and H.P. Keller. 1976. Mouse model for experimental studies into attenuated mutants of a Pasteurella multocida strain with pathogenicity for calves. 1. Isolation and biological characterization of streptomycin-dependent mutants (SM-D) and their examination for immunogenicity in comparison to thermally inactivated germs (German/E). Archiv fur Experimentelle Veterinarmedizin 30(6):835-843.

Keywords: streptomycin dependance, cattle, mice, vaccine, immunization, mutant, immunogenicity

Notes: Streptomycin-dependent mutants of a calf strain of P.M. were isolated that were more immunogenic for mice than thermally inactivated antigen.

747. Linkov, S. 1967. Using live virus vaccines against fowl cholera (Russian). Ptitsevodstvo 1:28-29.

Keywords: chicken, vaccine, immunization

Notes: The use of live vaccines against avian cholera is very briefly reviewed.

748. Linton, A.H. 1985. Antibiotic resistance in bacteria associated with animals and their importance to man. Journal of Antimicrobial and Chemotherapy 15(4):385-386.

Keywords: antibiotic, antibiotic resistance

Notes: (ONS)

749. Liou, D. 1981. Diagnosis and control of pasteurellosis in ducklings (Chinese). Chinese Journal of Veterinary Medicine 7(1):17-19.

Keywords: duck, vaccine, diagnosis, immunization, control

Notes: The diagnosis and control of avian cholera in ducklings is very briefly reviewed.

750. Liow, T.M. and T.P. Teo. 1978. Biochemical studies on Pasteurella multocida isolated from pigs and poultry. Singapore Veterinary Journal 2:29-32.

Keywords: strain, serotyping, biochemical test, strain comparison, culture

Notes: Of 46 biochemical and cultural reactions of 210 strains of P.M. isolated from pigs and poultry, 34 were common to all cultures. The percentage of cultures positive to the other 12 tests varied from 1 to 93.

751. Liow, T.M. 1977. Study of fowl cholera bacterins in cross-bred ducks. Singapore Veterinary Journal 1:37-41.

Keywords: adjuvant, vaccine, immunity, protection, serotype 1, duck

Notes: One or two doses of formalin-killed serotype 1-vaccine protected 92 percent of the ducks against homologous challenge.

752. Lipipun, V., K. Saitanu and S. Thoongsuwan. 1983. The potency test of *Pasteurella multocida* vaccine and immunoglobulins. Thai Journal of Veterinary Medicine 13(3):179-194.

Keywords: vaccine, immunization, rabbit, duck, antibody, immunity, lipopolysaccharide

Notes: (ONS)

753. Litjens, J.B. and J.M.F. Saes. 1977. Respiratory disorders and circling disease in turkeys poults as a result of fowl cholera (Dutch). Tijdschrift voor Diergeneeskunde 102(22):1325.

Keywords: respiratory tract, circling disease, turkey

Notes: A description of two signs of avian cholera as exhibited by turkey poults is given.

754. Little, P.A. 1948. Use of aureomycin in some experimental infections in animals. Annals of the New York Academy of Sciences 51:246-253.

Keywords: treatment, antibiotic sensitivity, aureomycin, antibiotic, Shigella gallinarum, chicken

Notes: Aureomycin was found to be effective against infections produced by P.M. and *Shigella gallinarum*.

755. Little, P.A. and B.M. Lyon. 1943. Demonstration of serological types within the nonhemolytic *Pasteurella*. American Journal of Veterinary Research 4:110-112.

Keywords: vaccine, strain comparison, P.avicida, P.bulbaseptica, P.muricida, passive immunity

Notes: Anti-pasteurella sera representing the three serological types consistently protected mice against all virulent, nonhemolytic *Pasteurella* studied.

756. Litvyak, V.A., V.I. Gevedze and E.I. Vaisman. 1978. Chemical composition and immunogenicity of soluble *Pasteurella* antigens (Russian). Trudy, Belorusskii Nauchno-Issledovatel'skii Institut Eksperimental'noi Veterinarii, Minsk 16:60-62.

Keywords: antigen, vaccine, immunization

Notes: (ONS)

757. Liu, J.Y. 1986. Studies on fowl cholera oil-emulsion vaccine (Chinese). Chinese Journal of Veterinary Science and Technology 7:10-12.

Keywords: vaccine, adjuvant, immunization

Notes: (ONS)

758. Locke, L.N. and R.C. Banks. 1972. Avian cholera in cedar waxwings in Ohio. Journal of Wildlife Diseases 8(1):106.

Keywords: case report, Ohio, cedar waxwing, host range, Bombycilla cedrorum, wild bird

Notes: A P.M. infection was responsible for a die-off of cedar waxwings in Ohio.

759. Locke, L.N., J.A. Newman and B.M. Mulhern. 1972. Avian cholera in a bald eagle from Ohio. Ohio Journal of Science 72(5):294-296.

Keywords: Haliaeetus leucocephalus, bald eagle, Ohio, host range, case report, eagle, raptor, wild bird

Notes: Avian cholera infection was diagnosed in an adult male bald eagle collected in Ohio.

760. Locke, L.N., V. Stotts and G. Wolfhard. 1970. An outbreak of fowl cholera in waterfowl on the Chesapeake Bay. Journal of Wildlife Diseases 6:404-407.

Keywords: oldsquaw, white-winged scoter, goldeneye, bufflehead, wild bird, duck, Clangula hyemalis, Melanitta deglandi, Bucephala clangula, Bucephala albeola, sea duck, case report, host range, waterfowl, Chesapeake Bay

Notes: An outbreak of avian cholera occurred in waterfowl wintering on the Chesapeake Bay in 1970.

761. Lohr, J.E. 1977. Causes of sudden drop in egg production in New Zealand laying flocks. New Zealand Veterinary Journal 25(4):100-102.

Keywords: egg production, chicken, New Zealand, case report, secondary effect, reproduction

Notes: Of ten cases of a sudden drop in egg production in chicken flocks, one was associated with avian cholera.

762. London, S.A. and K.E. Yaw. 1957. Antigenic analysis of dissociants and serological types of *Pasteurella multocida*. Canadian Journal of Microbiology 3(7):1021-1029.

Keywords: strain comparison, antigen, serotype 1, antigenic structure, colony morphology

Notes: Two colonial variants of a type 1 strain of P.M. were shown to be qualitatively identical in their antigenic stucture but to differ quantitatively with regard to one antigen.

763. Long, G.Y., H.Z. Liang and J.S. Liu. 1986. Immunization of rabbits against pasteurellosis. Chinese Journal of Veterinary Science and Technology 2:3-7.

Keywords: lyophilization, rabbit, vaccine, immunization

Notes: (ONS)

764. Love, D.N., R.F. Jones, M. Bailey, R. Canfield and H. McNaught. 1978. Bacteria isolated from subcutaneous abcesses in cats. Australian Veterinary Practioner June:

Keywords: transmission, cat, subcutaneous abcess, reservoir, case report

Notes: Samples were collected from subcutaneous wound abcesses in cats with P.M. being the most frequently isolated organism.

765. Lu, Y.S and S.P. Pakes. 1981. Protection of rabbits against experimental pasteurellosis by a streptomycin-dependent Pasteurella multocida serotype 3:A live mutant vaccine. Infection and Immunity 34(3):1018-1024.

Keywords: vaccine, rabbit, serotype 3, serotype A, streptomycin dependance, mutant, N-methyl-N'-nitro-N-nitrosoguandidine

Notes: A vaccine was prepared from a mutagenized wild strain. The streptomycin dependent mutant did not cause disease, death, or gross or microscopic lesions, but protected rabbits from developing clinical disease, death, and gross lesions. Mild focal lung lesions were noted in some vaccinated rabbits.

766. Lu, Y.S., S.P. Pakes, L. Massey and C. Stefanu. 1987. A potassium thiocyanate extract vaccine prepared from Pasteurella multocida 3:A protects rabbits against homologous challenge. Infection and Immunity 55(12):2967-2976.

Keywords: rabbit, vaccine, lipopolysaccharide, hyaluronic acid, protein, carbohydrate, antibody type, immunoglobulin A, immunoglobulin G, pathogenesis, location, serotype 3, serotype A

Notes: Vaccination of rabbits by the intranasal route using a potassium thiocyanate extract was superior to the intramuscular route by reducing the severity of pneumonia and the numbers of P.M. in the nasal cavities and lungs. Vaccination by the intranasal route produced persisting serum immunoglobulin G and nasal immunoglobulin A, while the intramuscular route produced persisting serum immunoglobulin G but transient nasal immunoglobulin A.

767. Lu, Y.S., S.P. Pakes and L. Massey. 1987. Hyperimmune serum from rabbits immunized with potassium thiocyanate extract of Pasteurella multocida protects against homologous challenge. Journal of Clinical Microbiology 25(11):2173-2180.

Keywords: rabbit, passive immunity, humoral immunity, vaccine, immunization, antigen, serotype 3, serotype A

Notes: Hyperimmune serum directed to the potassium thiocyanate extract of type 3:A P.M. provided protection against homologous challenge in rabbits.

768. Lu, Y.S., S.P. Pakes, J.E. Rehg and D.H. Ringler. 1982. Pathogenicity of a serotype 12A Pasteurella multocida isolate in hydrocortisone treated and untreated rabbits. Laboratory Animal Science 32(3):258-262.

Keywords: rabbit, hydrocortisone, cortisone, immunosuppression, serotype 12, serotype A, agar gel immunodiffusion, antibody, virulence

Notes: (ONS)

769. Luengpairat, K., V. Petchthanakul and K. Saitanu. 1986. Disinfectant action of iodine, chlorine and benzalkonium chloride on a duck strain of Pasteurella multocida. Thai Journal of Veterinary Medicine 16(1):51-57.

Keywords: disinfection, disinfectant, iodine, benzalkonium chloride, prevention, calcium hypochlorite

Notes: (ONS)

770. Lugtenberg, B., R. vanBoxtel, D. Evenberg, M. DeJong, P. Storm and J. Frik. 1986. Biochemical and immunological characterization of cell surface proteins of Pasteurella multocida strains causing atrophic rhinitis in swine. Infection and Immunity 52(4):175-182.

Keywords: membrane protein, antigen, antigen isolation, cell surface, atrophic rhinitis, swine, lipopolysaccharide, vaccine

Notes: An analysis of the immunological and biochemical properties of cell surface constituents of P.M. is presented.

771. Lugtenberg, B., R. vanBoxtel and M. DeJong. 1984. Atrophic rhinitis in swine: correlation of Pasteurella multocida pathogenicity with membrane protein and lipopolysaccharide

patterns. Infection and Immunity 46(1):48-54.

Keywords: antigen, cell surface, swine, membrane protein, strain comparison, vaccine, electrophoresis, sodium dodecyl sulfate gel electrophoresis, atrophic rhinitis, lipopolysaccharide

Notes: Cell envelope proteins and lipopolysaccharides of P.M. strains associated with atrophic rhinitis in swine were compared by using sodium dodecyl sulfate gel electrophoresis.

772. Luk'yanchenko, A.V. 1977. Pasteurellosis and methods of its control. Bulletin de l'Office International des Epizooties 87(7/8):613-619.

Keywords: culture, temperature, capsule, adjuvant, vaccine, immunization, control, USSR, carrier

Notes: A list of practical uses of water-oil vaccines in a variety of animals and birds is presented.

773. Lukas, V.S., D.H. Ringler, C.E. Chrisp and H.G. Rush. 1987. An enzyme-linked immunosorbent assay to detect serum IgG to Pasteurella multocida in naturally and experimentally infected rabbits. Laboratory Animal Science 37(1):60-64.

Keywords: serology, ELISA, rabbit, antigen, strain comparison, antibody, enzyme-linked immunosorbent assay, immunoglobulin G

Notes: An enzyme-linked immunosorbent assay utilizing a potassium thiocyanate extract of P.M. as the antigen was effective in detecting serum immunoglobulin G type antibody in infected rabbits.

774. Lumeij, J.T. and I. Westerhof. 1986. Acute septicemic Pasteurella multocida infection in an African gray parrot (Psittacus erithacus timneh) after a bite from a pet rat (Rattus norvegicus). Avian Pathology 15(4):791-794.

Keywords: African gray parrot, Psittacus erithacus timneh, Rattus norvegicus, case report, rat, treatment, antibiotic, penicillin, reservoir, host range, parrot, transmission

Notes: A parrot died from P.M. septicemia caused by a rat bite, stressing the need for immediate intravenous or intramuscular treatment with penicillin.

775. Lunitsyn, V.G. and I.A. Bakulov. 1985. Pasteurellosis in deer reared for pantocrine production (Russian). Veterinariya (Moscow) 6:37-40.

Keywords: case report, transmission, strain, deer, strain comparison, Cervus elaphus maral, Cervus nippon, host range, reservoir

Notes: Examination of the biochemical and cultural properties of 115 bacterial strains from deer that had died showed that they did not differ from strains from other animals and birds. The source of infection was believed to be other infected deer.

776. Macdonald, J.W., D. Owen, K.G. Spencer and P.E. Curtis. 1981. Pasteurellosis in wild birds. Veterinary Record 109(3):58.

Keywords: antibiotic, bite, case report, host range, wild bird, tawny owl, lapwing, pigeon, black headed gull, rat, blackbird, starling, Larus ridibundus, Turdus merula, Vanellus vanellus, Columba tivia, Rattus norvegicus, Sturnus vulgaris, Strix alvco, gull, reservoir

Notes: Cases of avian cholera from two bird hospitals in England are discussed.

777. Macheak, M.E. 1970. What turkey producers can expect from fowl cholera vaccine. Turkey World 45(8):10,22.

Keywords: treatment, turkey, vaccine, immunization

Notes: The outlook for avian cholera vaccines is reviewed.

778. Mack, W.B. and E. Records. 1916. The use of bacterins in the control of fowl cholera. University of Nevada Agriculture Experiment Station Bulletin 85:1-29.

Keywords: vaccine, chicken, turkey, immunization

Notes: The use of bacterins in the control of avian cholera is reviewed.

779. Madsen, E.B., M. Bisgaard, R. Mutters and K.B. Pedersen. 1985. Characterization of Pasteurella species isolated from lungs of calves with pneumonia. Canadian Journal of Comparative Medicine 49(1):63-67.

Keywords: strain comparison, cattle, lung, taxonomy, classification, Haemophilus, Actinobacillus, DNA

Notes: Many P.M.-like isolates recovered from pneumonic calf lungs had fermentation patterns different from that expected for P.M. DNA/DNA hybridizations including both ornithine positive and ornithine negative strains allowed the classification of the former as P.M. biovar 6 and the latter as V factor independent strains of Haemophilus avium.

780. Maestrone, G., E. Thompson and H. Yeisley. 1979. Viability of microbial strains of veterinary interest in collection-transport systems. Veterinary Medicine and Small Animal Clinician 74(9):1319-1322.

Keywords: survival, transport, medium, sample

Notes: Five commercial collection-transport systems were evaluated. The systems varied in their ability to perserve infectivity. Important variables were moisture and storage temperature.

781. Maglione, E. 1963. Behavior of the actual reaction in the muscles and viscera of sound fowls and of fowls experimentally infected by Pasteurella multocida (Italian/E). Annali della Facalta di Medicina Veterinaria di Torino 13:47-56.

Keywords: pH, metabolism, pathology, host physiology, secondary effect, muscle

Notes: The pH of muscle tissue was lowered at the site of inoculation with P.M.

782. Maglione, E. and C. Bieler. 1963. Observations on post-mortem modifications of the actual reaction in muscles and viscera of fowls died of chicken cholera (Italian/E). Annali della Facalta di Medicina Veterinaria di Torino 13:251-271.

Keywords: pH, metabolism, pathology, muscle, secondary effect

Notes: There was a decreased pH in the pectoral muscle at the site of inoculation.

783. Maheswaran, S.K., S.K. Dua and E.S. Thies. 1980. Studies on Pasteurella multocida. IX. Levamisole-induced augmentation of immune responses to a live fowl cholera vaccine. Avian Diseases 24(1):71-81.

Keywords: levamisole, turkey, immunostimulation, immunization, vaccine

Notes: Two trials showed that 79 percent of the turkeys that were vaccinated survived challenge 17 weeks after vaccination while 92 percent of turkeys that were vaccinated and treated with levamisole survived.

784. Maheswaran, S.K. and E.S. Thies. 1979. Pasteurella multocida antigen-induced in vitro lymphocyte immunostimulation, using whole blood from cattle and turkeys. Research in Veterinary Science 26:25-31.

Keywords: lymphocyte transformation, cellular immunity, turkey, cattle, lymphocyte

Notes: A whole blood lymphocyte stimultion assay to study cell-mediated immune responses in bovine pasteurellosis and avian cholera in turkeys is described.

785. Maheswaran, S.K. and E.S. Thies. 1979. Influence of encapsulation on phagocytosis of Pasteurella multocida by bovine neutrophils. Infection and Immunity 26(1):76-81.

Keywords: hyaluronic acid, strain comparison, opsonin, cellular immunity, phagocytosis, capsule, pathogenesis

Notes: A strain of thickly encapsulated P.M., which had hyaluronic acid as a major component of its capsule, was resistant to phagocytosis following opsonization with normal and hyperimmune sera.

786. Maheswaran, S.K., E.S. Thies and S.K. Dua. 1976. Studies on Pasteurella multocida. III. In vitro assay for cell-mediated immunity. Avian Diseases 20(2):332-341.

Keywords: turkey, lymphocyte transformation, cellular immunity, pathogenesis

Notes: The lymphocyte transformation assay was emphasized as a convenient and useful in vitro indicator of cell-mediated immunity that should help in defining its role in P.M. infections of turkeys.

787. Maheswaran, S.K., G.H. Johnson and B.S. Pomeroy. 1973. Studies on Pasteurella multocida. II. The capsular polysaccharides from turkey isolates. Avian Diseases 17(4):705-716.

Keywords: capsule, capsular antigen, turkey, polysaccharide, strain comparison

Notes: The capsular polysaccharides from nine strains of P.M. isolated from turkeys were purified and characterized. For optimal capsule production, seed cultures were obtained from colonies freshly isolated from turkeys immediately after death.

788. Maheswaran, S.K., J.R. McDowell and B.S. Pomeroy. 1973. Studies on Pasteurella multocida. I. Efficacy of an avirulent mutant as a live vaccine in turkeys. Avian Diseases 17(2):396-405.

Keywords: pathogenesis, immunization, vaccine, mutant

Notes: The vaccine was found to have lost its invasive characteristics and failed to disseminate to the organs, so no systematic protection was provided.

789. Malanowska, T. 1980. Synergetic action of trimethoprim and sulphonamides against strains of Pasteurella multocida isolated from various species of animals (Polish/E). Medycyna Weterynaryjna 36(8):461-463.

Keywords: strain comparison, antibiotic, antibiotic sensitivity, sulfonamide, trimethoprim, treatment

Notes: There was a clearly synergetic advantage to combining two drugs, regardless of the source of P.M. isolates tested.

790. Malik, Z. 1968. Classification of strains of Pasteurella multocida isolated from poultry (Czechoslovakian/E). Veterinarni Medicina (Praha) 13(8/9):481-487.

Keywords: hemagglutination, mouse protection test, serotype A, serotype 2, Czechoslovakia, strain comparison, serotyping, chicken

Notes: Of 144 strains of P.M. isolated from fowl in Czechoslovakia, 76 percent belonged to the A(2) group.

791. Mall, M.P. and H.V.S. Chauhan. 1979. A note on fowl cholera in goose. Indian Poultry Gazette 63(3):126-128.

Keywords: goose, duck, mice, chicken, case report, histopathology, India

Notes: The isolation of P.M and associated pathology are reported for a goose that died of pasteurellosis.

792. Mall, M.P. and P.R. Nilakantan. 1973. Preliminary observations on the haemagglutinating activity of Pasteurella multocida avian type. Indian Veterinary Journal 50(5):387-393.

Keywords: hemagglutination, erythrocyte, protein, antigen extraction

Notes: Direct hemagglutination of chicken erythrocytes by P.M. protein extracts was demonstrated.

793. Mall, M.P. and P.R. Nilakantan. 1971. Evaluation of different vaccines in the control of avian pasteurellosis. Indian Veterinary Journal 48(4):331-335.

Keywords: immunization, adjuvant, chicken, vaccine

Notes: Vaccines made with oil adjuvant and potassium thiocyanate extract incorporated in oil adjuvant gave the best results.

794. Malvin, M.D., L.K. Vaughn and M.J. Kluger. 1979. Blood pressure in unanesthetized bacterially infected rabbits: effects of antipyretic drug therapy. Circ. Shock 6(1):7-12.

Keywords: rabbit, fever, blood pressure, survival, pathogenesis, virulence

Notes: (ONS)

795. Manning, P.J., G. Brackee, M.A. Naasz, D. DeLong and S.L. Leary. 1987. A dot-immunobinding assay for the serodiagnosis of Pasteurella multocida infection in laboratory rabbits. Laboratory Animal Science 37(5):615-620.

Keywords: serology, rabbit, diagnosis, detection, immunoblot

Notes: A dot-immunobinding assay detected serum immunoglobulin G specific for lipopolysaccharide of rabbits isolates of P.M.. The assay detected antibody as soon as one week after experimental nasal infection, whereas eight weeks were required using the gel diffusion precipitin test. The assay was more sensitive than nasal culturing to detect P.M. infection.

796. Manning, P.J., M.A. Naasz, D. DeLong and S.L. Leary. 1986. Pasteurellosis in laboratory rabbits: characterization of lipopolysaccharides of Pasteurella multocida by polyacrylamide gel electrophoresis, immunoblot techniques, and enzyme-linked immunosorbent assay. Infection and Immunity 53(3):460-463.

Keywords: ELISA, polyacrylamide gel electrophoresis, immunoblot, antigen, lipopolysaccharide, enzyme-linked immunosorbent assay, rabbit, electrophoresis

Notes: The purification and evaluation of the lipopolysaccharide of five rabbit isolates of P.M. showed the lipopolysaccharide to contain a non-serospecific antigen, and a serospecific antigen.

797. Manning, P.J. 1984. Naturally occurring pasteurellosis in laboratory rabbits: chemical and serological studies of whole cells and lipopolysaccharides of Pasteurella multocida. Infection and Immunity 44(2):502-507.

Keywords: strain comparison, lipopolysaccharide, serotyping, rabbit, antigen

Notes: Whole cells and lipopolysaccharides of 10 isolates of P.M. were put to chemical and serological analysis showing that substances other than lipopolysaccharides are responsible for the type specificity that forms the basis for the A, B, D, or E classification of this organism.

798. Manning, P.J. 1982. Serology of Pasteurella multocida in laboratory rabbits: a review. Laboratory Animal Science 32(6):666-671.

Keywords: serology, rabbit, Oryctolagus, capsular antigen, somatic antigen, serotyping, antigen isolation, hemagglutination, lipopolysaccharide

Notes: The serology of P.M. is reviewed. The indirect hemagglutination test is based on the interaction of antibody with type specific lipopolysaccharide, and is therefore a test for somatic rather than capsular material.

799. Manninger, R. 1919. Concerning a mutation of the fowl cholera bacillus (German). Zentralblatt fur Bakteriologie, Parasitekunde, Infektionskrankheiten und Hygiene, Abteilung 83(7):520-528.

Keywords: mutant, colony morphology, virulence

Notes: An avirulent mutant is described.

800. Marius, V., J. Brocas, E. Thibault, M. Guittet and G. Bennejean. 1984. Respiratory diseases in waterfowl (French). Recueil de Medecine Veterinaire 160(11):1015-1024.

Keywords: duck, respiratory disease, antibiotic, treatment, France

Notes: The major causes, including P.M., of respiratory diseases in domestic waterfowl in France are discussed.

801. Marius-Jestin, J.V., M. LeMenec, E. Thibault, J.C. Moisan and R. L'Hospitalier. 1987. Normal phallus flora of the gander. Journal of Veterinary Medicine, Series B 34(1):67-78.

Keywords: goose, phallus, France

Notes: A total of 150 phallus swabs were examined by standard methods. P.M. was not isolated from any of the samples, and inoculation of healthy geese with P.M. did not reproduce the genital disease being considered.

802. Marshall, M.S., R.A. Robison and M.M. Jensen. 1981. Use of an enzyme-linked immunosorbent assay to measure antibody responses in turkeys against Pasteurella multocida. Avian Diseases 25(4):964-971.

Keywords: comparison, antibody, ELISA, humoral immunity, agglutination, enzyme-linked immunosorbent assay, serology, turkey

Notes: Comparison of ELISA and a microtiter agglutination test in turkeys vaccinated orally against fowl cholera showed the ELISA to be more sensitive.

803. Martineau, G., A. Broes and A. Kaeckenbeeck. 1984. Role of Pasteurella multocida in the etiology of atrophic rhinitis. Value of determining its antigenic structures (French). Annales de Medecine Veterinaire 128(1):5-19.

Keywords: atrophic rhinitis, swine, antigen, serotyping

Notes: (ONS)

804. Masdeu, V. 1981. Methods for isolation and identification of Pasteurella multocida (Spanish/E). Revista de Avicultura (Havana) 25(1/2):55-61.

Keywords: diagnosis, isolation, Salmonella, culture medium, detection, Salmonella pullorum, related bacteria, culture, Salmonella gallinarum

Notes: Diagnostic methods are reviewed for the isolation and identification of Salmonella pullorum gallinarum and P.M., emphasizing the principal culture media.

805. Masyukov, A.V. 1963. Contra-indications to the application of the Krasnodar Scientific Research Veterinary Station vaccine against avian pasteurellosis (Russian). Veterinarya (Moscow) 40(10):36.

Keywords: vaccine, immunization, contraindication

Notes: Adverse reactions to the use of vaccines are reported.

806. Mateev, M. 1973. The agglutination reaction in chickens immune or susceptible to P. multocida. Veterinarno-Meditsinski Nauki 10(7):16-17.

Keywords: carrier, serologic testing, agglutinin, vaccine, immunization, immunity

Notes: Vaccinated chickens produced agglutinins as early as the fifth day after vaccination. The level of agglutinins in the serum depended on the level and duration of the antigenic stimulus.

807. Mateev, M. and K. Goranov. 1972. Active immune prophylaxis of fowl cholera. III. Resistance and blood picture of vaccinated chicks

(Bulgarian/E). Veterinarno-Meditsinski Nauki 9(3):37-43.

Keywords: vaccine, immunization, neutrophil, serum protein, lysozyme, cellular immunity

Notes: Vaccination was shown to provide immediate stimulation of the immune response, leading to acquired immunity when used in infected flocks.

808. Mateev, M., N. Nikolov, A. Tuzsuzova and T. Peyuvska. 1972. Active immunoprophylaxis of fowl cholera. II. Comparative studies on postvaccinal immunity (Bulgarian/E). Veterinarno-Meditsinski Nauki 9(4):73-79.

Keywords: adjuvant, serum protein, vitamin A, metabolism, nutrition, chicken, vaccine

Notes: The effect of protection against P.M. infection was shown to vary within the 80-100 percent range for birds vaccinated once with an oil-emulsion vaccine and within the 50-60 percent range for those vaccinated twice.

809. Mathey, W.J. and P.J. Siddle. 1954. Isolation of Pasteurella pseudotuberculosis from a California turkey. Journal of the American Veterinary Medical Association 125(933):482-483.

Keywords: case report, California, P.pseudotuberculosis, turkey, related bacteria

Notes: P. pseudotuberculosis was isolated from a California turkey.

810. Matsubara, A., S. Mihara and R. Kusuda. 1985. Quantitation of yellowtail serum antibody specific for P. piscicida LPS using the ELISA technique (Japanese/E). Bulletin of the Japanese Society of Scientific Fisheries 51(6):927-932.

Keywords: ELISA, Seriola quinqueradiata, fish, yellowtail, related bacteria, enzyme-linked immunosorbent assay, antibody, lipopolysaccharide, serology, P.piscicida

Notes: An enzyme-linked immunosorbent assay was developed to assay lipopolysaccharide in the serum of the yellowtail Seriola quinqueradiata, a cultured marine fish. There was a high correlation between the concentration of specific antibody and agglutination titer of the serum.

811. Matsumoto, M. and D.H. Helfer. 1977. A bacterin against fowl cholera in turkeys: protective quality of various preparations originated from broth cultures. Avian Diseases 21(3):382-393.

Keywords: vaccine, turkey, culture medium, adjuvant

Notes: The immunogenicity of a broth culture vaccine varied depending on the culture medium, method of inactivation and the use of adjuvants.

812. Matsuoka, T., T.M. Folkerts and C. Gale. 1972. Evaluation in calves of an inactivated bovine rhinotracheitis and parainfluenza-3 vaccine combined with Pasteurella bacterin. American Veterinary Medical Association Journal 160(3):333-337.

Keywords: vaccine, immunization, combined vaccine, bovine rhinotracheitis virus, parainfluenza-3 virus, cattle, P.haemolytica

Notes: Vaccinated calves were protected against virulent infectious bovine rhinotracheitis virus challenge.

813. Matthes, S. 1982. Ozonization of the air as a hygienic measure in rabbit and broiler chicken farms (German/E). Landbauforschung Volkenrode 32(3):173-176.

Keywords: ozonation, sanitation, rabbit, chicken, aerosol, disinfection, secondary effect, feed conversion, growth

Notes: Ozonation (0.1 ppm) did not prevent airborne transmission of P.M. in rabbit houses and did not affect the growth rate, feed efficiency, and health situation of brioler chickens.

814. Maung, S.B.E. and Y.M. Eissa. 1969. The biological properties of avian Pasteurella, its prophylaxis and therapeutic control. Union of Burma Journal of Life Sciences 2(1):17-21.

Keywords: chicken, duck, antibiotic, vaccine, adjuvant, portal of entry, alum, biochemical test

Notes: Burmese isolates of P.M. could be grouped by their ability to ferment either mannite or xylose. Chickens could be infected by inoculation into the crop, intranasally, or intraocularly.

815. Mazurczak, J., B. Owczarczyk, J. Grabowski and M. Mazurkiewicz. 1978. Attempts to apply HPN for the prophylaxis and treatment of coccidiasis in chickens (Polish/E). Medycyna Weterynaryjna 34(2):102-104.

Keywords: folic acid, coccidiosis, chicken, treatment, secondary infection

Notes: A new anti-metabolite of folic acid in the prophylaxis and treatment of coccidiosis in poultry was examined. P.M. was a complicating infection.

816. McCune, E.L. 1965. Cholera might strike your flock next. Poultry Meat September, 1965:T28-T31.

Keywords: general, turkey, treatment, vaccine

Notes: A report was made on avian cholera dealing with symptoms, causative agents, control and treatment.

817. McKinney, K.L., A.W. Confer, J.A. Rummage, M.J. Gentry and J.A. Durham. 1985. Pasteurella haemolytica: purification of saline-extractable proteins by isoelectricfocusing. Veterinary Microbiology 10(5):465-480.

Keywords: related bacteria, P.haemolytica, antigen, antigen isolation, isoelectric focusing, immunoelectrophoresis, serotype 1, vaccine, adjuvant, cattle, ELISA, enzyme-linked immunosorbent assay

Notes: Seven antigens were identified by immunoelectrophoresis in a saline extract of P. haemolytica serotype 1. The isoelectric points of most of the antigens were determined. The extract and antigens were tested for immunogenicity by vaccinating calves.

818. McKinney, K.L., P.A. Rebers and R.B. Rimler. 1982. Immunogenicity of potassium thiocyanate extracted and electrofocused Pasteurella multocida X-73I antigens in chickens and mice. Canadian Journal of Microbiology 28(11):1219-1225.

Keywords: toxin, lipopolysaccharide, chicken, mice, antigen isolation, isoelectric focusing, immunization, serology

Notes: The immunogenicity of potassium thiocyanate extracted antigenic fractions was measured in chickens and mice. The particulate antigens induced a greater serological response than the soluble fraction.

819. McKinney, K.L. and P.A. Rebers. 1982. Purification of Pasteurella multocida antigens by ultracentrifugation and isoelectrofocusing. Canadian Journal of Microbiology 28(5):511-521.

Keywords: antigen isolation, antigen, ultracentrifugation, isoelectric focusing

Notes: A procedure to purify P.M. antigens extracted by potassium thiocyanate was developed.

820. McKinney, K.L. and R.B. Rimler. 1981. Immunoelectrophoresis employing avian antisera for the detection and quantitation of Pasteurella multocida antigens. Journal of Immunological Methods 43(1):1-13.

Keywords: antigen, counterimmunoelectrophoresis, turkey, chicken, immunoelectrophoresis, buffer

Notes: The effects of pH, buffer and molarity on the resolution of immunoprecipitates were determined. The 0.05M sodium acetate-acetic acid (pH 5.6) was the most suitable buffer.

821. McKinney, K.L. and P.A. Rebers. 1980. Chemotaxis of fowl monocytes to Pasteurella multocida and associated antigens. Avian Diseases 24(3):641-647.

Keywords: humoral immunity, chemotactic factor, monocyte, antigen, antibody

Notes: The presence of heat-labile and heat-stable chemotaxigens in serum suggested that antibody and complement were involved in the stimulation of chemotoxis.

822. McLandress, M.R. 1983. Sex, age, and species differences in disease mortality of Ross' and lesser snow geese in California: implications for avian cholera research. California Fish and Game 69(4):196-206.

Keywords: environment, pollutant, wild bird, pathogenesis, age, sex, lesser snow goose, Anser rossii, Ross' goose, Anser caerulescens caerulescens, host range, California, waterfowl, goose

Notes: Data indicated that mortality from disease may not have been equal across all sex and age classes of geese. Also, outbreaks may have resulted from the synergism of bacteria with pollutants or naturally occuring environmental factors.

823. McMurray, B.L. 1987. Using killed vaccines for broilers and breeders. Poultry Digest 46(541):124,130,-132-133.

Keywords: vaccine, immunization, chicken

Notes: The use of both killed and live avian cholera vaccines gave results that varied from excellent to poor.

824. McNeil, E. and W.R. Hinshaw. 1948. The effect of streptomycin on Pasteurella multocida in vitro, and on fowl cholera in turkeys. Cornell Veterinarian 38:239-246.

Keywords: antibiotic, antibiotic sensitivity, turkey, treatment, streptomycin

Notes: Streptomycin inhibited growth of P.M. in vitro and in vivo at levels of 1.0 mg per ml and 150,000 units, respectively.

825. Menyailo, V.D. 1980. Aerosol disinfection on the farm (Russian). Veterinariya (Moscow) 9:25-27.

Keywords: chicken, formaldehyde, creolin, cattle, swine, prevention, disinfection, aerosol

Notes: Disinfection with an 3:1 mixture of formaldehyde and creolin was effective against pasteurellosis and other diseases.

826. Meszaros, J.F. 1983. Control of infectious diseases in large-scale poultry breeding and production. World's Poultry Science Journal 39(2):132-142.

Keywords: chicken, turkey, feed, immunization, control

Notes: General preventive measures aimed at the control of infectious diseases in intensive poultry breeding included the isolation of farms and the prevention of the spread of pathogens in feed and stock originating from other farms.

827. Metwally, M.A.E.R., L. ElGhanam and M. Miligy. 1978. Argus persicus as a potential vector of fowl cholera and gallinarum-pullorum diseases in birds. Veterinary Medical Journal (Cairo) 26(26):223-230.

Keywords: tick, Argus persicus, vector, reservoir, transmission, Salmonella gallinarum, survival, Salmonella pullorum, Salmonella

Notes: Ticks acquired the P.M. bacterium within 3 to 12 hours of attachment to infected chickens, and could transmit the bacterium to other chickens for at least 24 hours. The bacterium survived in ticks for up to 31 days at room temperature.

828. Meyeringh, H., C. Dirks, P. Schoss and H. Schimmelpfennig. 1977. Studies of the etiology of atrophic rhinitis in swine. II. Capsular serotyping of Pasteurella multocida cultures isolated from swine affected with atrophic rhinitis (German/E). Deutsche Tieraerztliche Wochenschrift 84(7):266-268.

Keywords: swine, serotype D, serotype A, serotype B, capsular antigen, serotyping, strain comparison

Notes: There was no significant difference in the distribution of capsular antigenic types A and D between healthy and diseased swine.

829. Micalizzi, B., R.F. Segovia and R. Ertola. 1980. Cultivation of Pasteurella multocida under agitated conditions, in sterilized and non-sterilized media. Revista Latinoamericana de Microbiologia 22(4):185-188.

Keywords: medium, culture, growth, pH

Notes: A study to cultivate P.M. using sterile and non-sterile media and the influence of pH on population levels is reported.

830. Michael, A., E. Yarkon, R. Konshtok, B.A. Peleg and K. Hornstein. 1986. Aerosol vaccination of turkeys against fowl cholera with the M-3-G mutant strain of Pasteurella multocida vaccine. Israel Journal of Veterinary Medicine 42(2):79-83.

Keywords: vaccine, immunization, turkey, aerosol, secondary effect

Notes: Laboratory trials showed the M-3-G strain of P.M. applied by aerosol elicited a solid immunity with only transient side effects.

831. Michael, A., E. Geier, R. Konshtok, I. Hertman and J. Markenson. 1979. Attenuated live fowl cholera vaccine. III. Laboratory and field vaccination trials in turkeys and chickens. Avian Diseases 23(4):877-885.

Keywords: immunization, turkey, chicken, mycoplasma, vaccine, serotype 1

Notes: An attenuated strain of serotype 1 P.M. was found to immunize turkeys and chickens against avian cholera when the vaccine strain was administered via drinking water.

832. Michael, A., E. Geier, R. Konshtok, I. Hertman and J. Markenson. 1979. Attenuated live fowl cholera vaccine. II. Some biological properties of strain M-3-G. Avian Diseases 23(4):870-877.

Keywords: chicken, turkey, Japanese quail, survival, gastric acidity, pH, pathogenesis, vaccine, quail

Notes: The attenuated P.M. strain (M3G) was tested for its effect on chicks, turkeys poults and Japanese quail of various ages.

833. Michael, A., M. White, E. Geier and R. Konshtok. 1976. Observations on the vaccination of turkeys and chickens against pasteurellosis (fowl cholera) with inactivated, autogenous bacterins. Refuah Veterinarith 33(3/4):117-126.

Keywords: strain comparison, vaccine, immunization, chicken, turkey, Israel, carrier

Notes: After vaccination of over a million turkeys in Israel it was concluded that three inoculations of autogenous vaccine prevented outbreaks of avian cholera and enabled economical rearing of fowls and turkeys even in the presence of subclinical infection.

834. Michalek, K. 1979. Fowl cholera (Slovak). Veterinarstvi 29(5):220-222.

Keywords: review, control, prevention

Notes: Pasteurellosis in avian species is reviewed.

835. Michalek, K. 1965. New problems in prevention and control of fowl cholera in geese in the HZ-fattening station (Slovak). Veterinarstvi 15(9):400-401.

Keywords: goose, control, prevention

Notes: Control measures for avian cholera are briefly presented.

836. Mihaescu, O., G.H. Mirescu, C. Popescu and D. Vasilescu. 1968. Epizootiological observations on weather and local factors on the incidence of outbreaks of avian pasteurellosis (Romanian). Revista de Zootehnie si Medicina Veterinara 18(4):39-46.

Keywords: weather, stress, environment, chicken

Notes: The influence of weather and other environmental factors on the appearance of avian cholera is discussed.

837. Mikazuki, K., K. Takahashi, K. Nanba and Y. Hayashi. 1987. Selective media for Pasteurella pneumotropica (Japanese/E). Experimental Animal 36(3):229-237.

Keywords: medium, selective medium, isolation, culture, related bacteria, P.pneumotropica, tellurite, kanamycin, bacitracin

Notes: A selective medium was formulated by adding potassium tellurite, kanamycin and bacitracin to heart infusion agar supplemented with digested blood

838. Miniciuna, V., P. Mitroiu, S. Danciu, D. Marica, I. May and V. Gogoasa. 1961. Study of the complex of factors influencing the appearance and persistence of foci of avian cholera (Romanian). Lucrarile Stiintifice ale Institutului Patologie si Igiena Animala II:219-231.

Keywords: carrier, chicken, nutrition, environment, stress

Notes: The roles of environmental stress, nutrition, carrier state, and sanitation in the appearance and persistence of avian cholera are discussed.

839. Miringa, E.N. 1975. Pasteurellosis in African grey parrots (Psittacus erithacus L.). Avian Diseases 19(4):812-813.

Keywords: Psittacus erithacus, case report, African grey parrot, host range, parrot

Notes: P.M. was isolated from an African grey parrot diagnosed as having avian cholera.

840. Mitrovic, M., E.G. Schildknecht, G. Maestrone and H.G. Luther. 1980. Rofenaid in the control of Pasteurella anatipestifer and Escherichia coli infections in ducklings. Avian Diseases 24(2):302-308.

Keywords: related bacteria, P.anatipestifer, Escherichia coli, duck, sulfonamide, antibiotic, treatment, control, sulfadimethoxine, ormetoprim

Notes: A proprietary combination of sulfadimethoxine and ormetoprim, administered in feed at levels from 0.02 to 0.08 percent, controlled infections in ducklings caused by P. anatipestifer and Escherichia coli.

841. Mitrovic, M., W.L. Marusich and J. Fellig. 1972. Chemotherapeutic, nutritional and biochemical compatibility of Rofenaid and Ipropran in turkeys. Poultry Science 51(3):764-770.

Keywords: antibiotic, sulfadimethoxine, ormetoprim, Eimeria, treatment, turkey, sulfonamide, ipronidazole

Notes: A mixture of a sulfadimethoxine-potentiated mixture and ipronidazole was safe and effective against multiple turkey diseases, including avian cholera.

842. Mitrovic, M., G. Fusiek and E.G. Schildknecht. 1971. Antibacterial activity of sulfadimethoxine potentiated mixture (Rofenaid) in turkeys. Poultry Science 50(2):525-529.

Keywords: treatment, Escherichia coli, Paracolon arizona, Salmonella typhimurium, antibiotic, sulfadimethoxine, ormetoprim, turkey, sulfonamide

Notes: A sulfadimethoxine-potentiated mixture provided effective chemoprophylactic antibacterial activity against turkey diseases, including avian cholera.

843. Mitrovic, M. and J.C. Bauernfeind. 1971. Efficacy of sulfadimethoxine in turkey diseases. Avian Diseases 15(4):884-893.

Keywords: antibiotic, sulfonamide, sulfadimethoxine, Eimeria, turkey, treatment, prevention, related bacteria

Notes: Sulfadimethoxine administered in food or drinking water was highly effective in preventing morbidity and mortality from P.M. and several *Eimeria* species.

844. Mitrovic, M., G. Fusiek and E.G. Schildknecht. 1969. Antibacterial activity of sulfadimethoxine potentiated mixture (RO 5-0013) in chickens. Poultry Science 48(4):1151-1155.

Keywords: antibiotic, sulfadimethoxine, RO5-0013, chicken, Escherichia coli, Salmonella typhimurium, Haemophilus gallinarum, treatment, related bacteria

Notes: A sulfadimethoxine mixture in feed gave a high degree of protection from avian cholera.

845. Mitrovic, M. 1967. Chemotherapeutic efficacy of sulfadimethoxine against fowl cholera and infectious coryza. Poultry Science 46(5):1153-1158.

Keywords: treatment, sulfonamide, sulfadimethoxine, chicken, turkey, antibiotic, infectious coryza

Notes: Given at a dosage of 0.05 percent active drug in the drinking water, sulfadimethoxine gave a high degree of chemotherapeutic activity against avian cholera.

846. Mitrovic, M., P.H. Matisheck and L.C. Lynch. 1962. Studies on local tissue reaction and adjuvant effect on the antigenicity of fowl cholera emulsified bacterins in chickens. Poultry Science 41(1):87-91.

Keywords: vaccine, pathology, chicken, immunization, adjuvant, antigen

Notes: An emulsified bacterin made with mineral oil adjuvant appeared the most efficacious among the preparations tested.

847. Mittal, K.R., T.N. Jaiswal and B.K. Gupta. 1979. Studies on haemorrhagic septicaemia oil adjuvant and multiple emulsion adjuvant vaccines. II. immunity trials in mice, rabbits and calves. Indian Veterinary Journal 56(6):449-454.

Keywords: mice, rabbit, cattle, adjuvant, hemorrhagic septicemia, vaccine, immunization

Notes: Immunization trials of multiple emulsion and oil adjuvant vaccines against hemorrhagic septicemia were done to compare the duration of immunity in mice, rabbits and calves.

848. Mo, C.L. and E.C. Burgess. 1987. Infection of duck plague carriers with *Pasteurella multocida* and *Pasteurella anatipestifer*. Avian Diseases 31(1):197-201.

Keywords: Anas platyrhynchos domesticus, Anas platyrhynchos platyrhynchos, white pekin, mallard, P.anatipestifer, duck plague virus, susceptibility, duck viral enteritis, host range, Anas platyrhynchos

Notes: Mallards were much more susceptible to avian cholera than white pekin ducks.

849. Mohamed, O.E., E.Y. Ismail, A.A. Fayed and M.H. Fahim. 1980. The nutritional status of chickens under the influence of vaccination and challenge infection. II. Nutrition-fowl cholera disease interrelationship. Journal of Egyptian Veterinary Medical Association 40(4):105-109.

Keywords: vaccine, chicken, vitamin A, serum protein, serum electrolyte, metabolism, physiology, nutrition

Notes: Serum vitamin A levels decreased following either vaccination or challenge of chickens with P.M. Serum electrolytes and total serum proteins remained constant, except for serum inorganic phosphorus, which increased in unvaccinated birds after challenge.

850. Mohamed, O.E., A.N. Attia, F.A. El-Nawawi and A.A. Geneidy. 1979. Role of vitamin A on the resistance of Egyptian chicks to pasteurellosis with special reference to quality of dressed carcasses. Journal of the Egyptian Veterinary Medical Association 39(3):155-166.

Keywords: vitamin A, chicken, diet, nutrition, meat, carcass, resistance

Notes: (ONS)

851. Molnar, I. 1981. Immunization trials against fowl cholera (Hungarian). Magyar Allatorvosok Lapja 36(6):415-418.

Keywords: vaccine, antigen, strain comparison, Hungary, antigen extraction

Notes: A vaccine prepared by ethanol or methanol treatment of a single strain provided protection against all Hungarian strains of P.M., although virulence of the strains differed.

852. Molnar, J. 1970. Problems of active immunization against fowl cholera (Hungarian). Magyar Allatorvosok Lapja 25(8):438-440.

Keywords: vaccine, immunization

Notes: Problems encountered with the use of vaccines against avian cholera are reported.

853. Montgomery, R.D., G. Stein,Jr., V.D. Stotts and F.H. Settle. 1979. The 1978 epornitic of avian cholera on the Chesapeake Bay. Avian Diseases 23(4):966-978.

Keywords: sex, chicken, turkey, sparrow, loon, Gavia immer, herring gull, Larus argentatus, great black-backed gull, Larus marinus, double-creasted cormoront, Phalacrocorax avritus, wild bird, Maryland, Virginia, diving duck, red-breasted merganser, Mergus serrator, Canada goose, Branta canadensis, American coot, Fulica americana, muscovy, Cairina moschata, goldeneye, Bucephala clangula, Clangula hyemalis, whistling swan, Olor columbianus, host range, Chesapeake Bay, bufflehead, Bucephala albeola, surf scoter, Melanitta perspicillata, scoter, Melanitta nigra, greater scaup, Aythya marila, horned grebe, Podiceps auritus, waterfowl, duck, gull, goose

Notes: A severe outbreak of avian cholera among wildfowl, primarily diving ducks, during March and April of 1978, is detailed.

854. Moore, R.L. and C.D. Simpson. 1981. Disease mortality of waterfowl on Texas Playa lakes. Southwestern Naturalist 25(4):566-568.

Keywords: case report, avian botulism, duck, waterfowl, Texas, Playa Lakes Region, wild bird, host range, ruddy duck, Oxyura jamaicensis, blue-winged teal, Anas discors, northern shoveler, Anas clypeata, American widgeon, Anas americana, pintail, Anas acuta, green-winged teal, Anas crecca, mallard, Anas platyrhynchos, redhead, Aythya americana, wood duck, Aix sponsa, merganser, Mergus spp., teal

Notes: Die-offs of waterfowl due to avian botulism and avian cholera in the playa lakes region of Texas in 1977 and 1978 are reported.

855. Moore, V.A. 1895. A study of a bacillus obtained from three outbreaks of fowl cholera. U.S. Department of Agriculture, Bureau of Animal Industries Bulletin 8:39-62.

Keywords: chicken, growth, isolation, colony morphology

Notes: One of the earliest characterizations of avian cholera in the United States is presented.

856. Moore, V.A. 1895. A preliminary investigation of diptheria in fowls. U.S. Department of Agriculture, Bureau of Animal Industries Bulletin 8:39-62.

Keywords: sanitation, prevention, treatment

Notes: Description of the signs of the disease, its chronic course, treatment and the importance of sanitary methods in flock situations are given.

857. Morad, S., S. ElAmrousi, A. Barakat and T. ElAllawy. 1980. Experimental studies of some strains of Pasteurella multocida from different animals in Assiut. Assiut Veterinary Medical Journal 7(13/14):339-346.

Keywords: sheep, strain comparison, virulence, cattle, dog, serotype A, serotype E, serotype D, serotype B, Egypt

Notes: Previously identified strains of P.M. types A, B, D, and E were used for studying the pathogenicity of each strain in sheep.

858. Morck, D.W., T.J.G. Raybould, S.D. Acres, L.A. Babiuk, J. Nelligan and J.W. Costerton. 1987. Electron microscopic description of glycocalyx and fimbriae on the surface of Pasteurella haemolytica-A1. Canadian Journal of Veterinary Research 51(1):83-88.

Keywords: adsorption, adherence, ultrastructure, related bacteria, glycocalyx, fimbriae, P.haemolytica, virulence, pathogenesis

Notes: Logarithmic phase cells of P. haemolytica have both fimbrae and extensive anionic glycocalyx at their surface. These structures may aid in the colonization of the bovine respiratory tract and subsequent pathogenesis.

859. Morisse, J.P. 1979. Prevention of pasteurellosis in the rabbit: trial of three vaccines (French/E). Recueil de Medecine Veterinaire 155(9):693-702.

Keywords: vaccine, rabbit, immunization, adjuvant, combined vaccine

Notes: (ONS)

860. Morozumi, T. and T. Hiramune. 1982. Effect of temperature on the survival of Haemophilus parasuis in physiological saline. National Institute of Animal Health Quarterly 22(2):90-91.

Keywords: related bacteria, Haemophilus parasuis, survival, saline, temperature

Notes: (ONS)

861. Morris, E.J. 1958. Selective media for some Pasteurella species. Journal of General Microbiology 19:305-311.

Keywords: related bacteria, medium, isolation, selective medium, P.septica, P.pseudotuberculosis, P.haemolytica, P.pestis, culture, growth

Notes: Three selective media are described for the isolation of P. pestis, P. pseudotuberculosis, and P. haemolytica from material heavily contaminated with other bacteria.

862. Mraz, O., F. Sisak and P. Jelens. 1980. The Pasteurella carriers in farm and laboratory animals. Comparative Immunology, Microbiology and Infectious Diseases 2:437-445.

Keywords: carrier, respiratory tract, farm animal, albino rat, cattle, chicken, guinea pig, mice, swine, rabbit, P.pneumotropica, P.ureae, P.gallinarum, Actinobacillus, rat, age

Notes: P.M. and other Pasteurella were found in all of the farm species and their age groups, independent of the health condition on the particular farm.

863. Mraz, O., P. Jelen and J. Bohacek. 1977. On species characteristics of Pasteurella gallinarum Hall et al. 1955. Acta Veterinaria Brno 46:135-147.

Keywords: chicken, P.gallinarum, related bacteria, serotyping, DNA, strain comparison, virulence

Notes: The bacteriological, serological, chemical and biolgical analyses of 31 strains of P. gallinarum are given.

864. Mraz, O. 1977. Antigenic relationship between Pasteurella and Actinobacillus organisms (Czechoslovakian/E). Veterinarni Medicina (Praha) 22(2):121-132.

Keywords: Actinobacillus, Actinobacillus equuli, Actinobacillus haemolyticus, Actinobacillus lignieresii, Actinobacillus salpingitidis, serotyping, strain comparison, agar gel immunodiffusion, hemagglutination, P.gallinarum, P.pneumotropica, P.ureae, classification, taxonomy

Notes: Several procedures used to examine antigenic relationships confirmed that Pasteurella and Actinobacillus are separate genera.

865. Mraz, O. 1971. On the diagnosis of suspect strains of Pasteurella multocida (Czechoslovakian/E). Veterinarni Medicina (Praha) 16(1):19-28.

Keywords: diagnosis, growth, isolation, colony morphology, Czechoslovakia

Notes: (ONS)

866. Mraz, O., F. Massalema and M. Sovadina. 1971. On the diagnosis of suspect strains of Pasteurella multocida (Czechoslovakian/E). Veterinarni Medicina (Praha) 16(1):19-28.

Keywords: diagnosis, identification, culture, medium, urease, man, cattle, sheep, goat, swine, mink, rabbit, chicken, biochemical test, methyl red, indole, lactose, maltose, fermentation test

Notes: The uniformity and differentiation value was shown for the methyl red test, the tests for indole and urease, and for the fermentation tests for lactose and maltose.

867. Mudrov, H. 1968. Enzyme activity of certain types and strains of Pasteurella multocida (Bulgarian/E). Veterinarno-Meditsinski Nauki 5(9):55-64.

Keywords: strain, serotyping, antibiotic, enzyme, strain selection, virulence, mice, pigeon, urease, asparaginase, alkaline phosphatase, protease, dehydrogenase, biochemical test

Notes: The levels of enzyme (urease, asparaginase, alkaline phosphatase, protease, and dehydrogenase) activities of five types of laboratory strains of P.M. were compared to antibiotic-adapted strains and to strains made virulent by passage through mice and pigeons.

868. Mukherji, P.C. 1981. Beware of fowl cholera. Indian Poultry Review 12(17):27, 29-33.

Keywords: chicken, general, case report, India

Notes: A case history is presented of chicken mortality found to be avian cholera.

869. Mukkur, T.K.S., N.A. Pyliotis and A. Barnes. 1982. Possible immunological synergism among

the protective antigens of Pasteurella multocida, type A. Journal of Comparative Pathology 92(2):249-260.

Keywords: antigen, vaccine, immunization, lipopolysaccharide, ultracentrifugation, antigenic synergism, affinity chromatography, protein, serotype A, antigen extraction

Notes: Attempts to isolate immunogenicallyenriched preparations of the protective antigens from the potassium thiocyanate extract of P.M. showed the isolated fractions to be not as good immunologically as the parent extract.

870. Mukkur, T.K.S. and N.A. Pyliotis. 1981. The potassium thiocyanate extract of Pasteurella multocida: electron microscopy and susceptibility of its immunogenic activity to some physical, chemical and enzymatic treatments. Journal of Comparative Pathology 91(3):427-437.

Keywords: antigen, serotype A, vaccine, immunization, cell wall, passive immunity, antibody, glycoprotein, electron microscopy, polyacrylamide gel electrophoresis, trypsin, antigen extraction

Notes: The immunogenic activity of a potassium thiocyanate extract of type A P.M. was associated with a protein derived from the cell wall.

871. Mukkur, T.K.S. 1979. Immunogenicity of a chaotropically extracted protective antigen(s) of Pasteurella multocida type A (bovine origin) against experimental pasteurellosis in mice. Journal of General Microbiology 113(1):37-43.

Keywords: antigen, mice, vaccine, immunization, antibody, serotype A, antigen extraction

Notes: Immunization of mice with a potassium thiocyanate extract of P.M. imparted complete protection against challenge.

872. Mukkur, T.K.S. 1978. Immunologic and physiologic responses of calves inoculated with potassium thiocyanate extract of Pasteurella multocida type A. American Journal of Veterinary Research 39(8):1269-1273.

Keywords: cattle, vaccine, antigen, serotype A, antibody, adjuvant, antigen extraction

Notes: The antibody response was significantly higher in calves inoculated with the potassium thiocyanate extract than those inoculated with saline-tris buffer extract.

873. Mukkur, T.K.S. 1977. Demonstration of cross-protection between Pasteurella multocida type A and Pasteurella haemolytica serotype 1. Infection and Immunity 18(3):583-585.

Keywords: immunization, vaccine, P.haemolytica, mice, antibody, cross protection, serotype A, serotype 1, immunity

Notes: Mice immunized with the potassium thiocyanate extract of P. haemolytica serotype 1 resisted a challenge infection of P.M. type A.

874. Mukkur, T.K.S. and P.R. Nilakantan. 1972. Preliminary characterization of the crude capsular extracts of Pasteurella multocida var. bovine, type 1 in phase 1. Cornell Veterinarian 62(2):289-296.

Keywords: mice, serotype 1, toxicity, protein, carbohydrate, antigen, capsular antigen, hemagglutination, antigen extraction

Notes: The chemical composition and the immunogenic and toxic properties of crude potassium thiocyanate and sodium chloride extracts of P.M. were compared.

875. Mulbagal, A.N., V.B. Kulkarni, V.L. Paranjape and P.D. Sardeschpande. 1972. Some observations on pasteurellosis in ducks. Indian Veterinary Journal 49(6):544-546.

Keywords: case report, strain comparison, duck, India, muscovy, pathology, biochemical test, host range, zoo, hydrogen sulfide

Notes: Isolation of P.M. from ducks in the Bombay Zoo is described. The strain differed from typical P.M. by failing to produce hydrogen sulfide.

876. Muller, H.E. 1971. Studies of the in vivo action of Pasteurella multocida neuraminidase (German/E). Zeitschrift fur Immunitaetsforschung 142(1):31-37.

Keywords: hemopexin, man, haptoglobin, alpha glycoprotein, pathology, guinea pig, serum protein, transferrin, immunoglobulin A, neuraminidase, immunoelectrophoresis

Notes: The action of the enzyme neuraminidase on the serum glycoproteins of a guinea pig infected with P.M. was demonstrated by immunoelectrophoresis.

877. Muller, W., K. Groning and F. Hartmann. 1981. The tenacity of bacteria in the airborne state. I. Communication: Experimental examinations for the determination of the kill constant beta for E., Salmonella spp. and Pasteurella multocida (German/E). Zentralblatt fur Bakteriologie Mikrobiologie und Hygiene, Abteilung I Originale B 172(4-5):367-376.

Keywords: aerosol, survival, related bacteria, Escherichia coli, Salmonella

Notes: The viability of aerosolized P.M., Escherichia coli, and Salmonella spp. was determined in a static aerosol chamber.

878. Murata, M., T. Horiuchi and S. Namioka. 1964. Studies on the pathogenicity of Pasteurella multocida for mice and chickens on the basis of O-groups. Cornell Veterinarian 54(2):293-307.

Keywords: capsular antigen, serotyping, strain comparison, antigen, swine pneumonia, virulence, pathology

Notes: The pathogenicity, virulence and pathology for chickens and mice, and the antigenic properties of two cultures of P.M. with different O antigens were studied.

879. Murray, G.E., R.S. Tobin, B. Junkins and P.J. Kushner. 1984. Effect of chlorination on antibiotic resistance profiles of sewage-related bacteria. Applied and Environmental Microbiology 48(1):73-77.

Keywords: antibiotic resistance, sewage, water, survival

Notes: Chlorination may substantially increase the proportions of antibiotic resistant, potentially pathogenic organisms, including P.M.

880. Murthy, K.G., P.R. Rao, P.K. Sriramen, V.P. Rao and M.J. Reddy. 1981. Air sacculitis in ducks. Indian Veterinary Journal 58(1):13-14.

Keywords: duck, air sacculitis, related bacteria, P.anatipestifer, culture, pathology

Notes: Air sacculitis in adult ducks associated with P. anatipestifer with detailed histopathology of lesions is presented.

881. Murti, P.S.R.C. 1971. Studies on fowl cholera. I. Biochemical investigations of Pasteurella multocida. Acta Veterinaria Academiae Scientiarum Hungaricae 21(2/3):313-317.

Keywords: strain comparison, Hungary, phosphatase, biochemical test

Notes: Phophatase acitivity and fermentation capability were examined for avian and mammalian P.M. isolates from Hungary.

882. Muryi, A., V. Sazhnev, I. Dubrov and F. Bibikov. 1979. Treatment of waterfowl (ducks) from pasteurellosis (Russian). Ptitsevodstvo (Moscow) 3:40.

Keywords: vaccine, Krasnodar territory, USSR, duck, waterfowl, antibiotic

Notes: The use of antibiotics and vaccines in controlling avian cholera in Krasnodar Territory, USSR is discussed.

883. Muryi, A.A., F.A. Bibikov, V.N. Sazhnev and I.S. Dubrov. 1979. Eradication of pasteurellosis from duck and goose flocks (Russian). Veterinariya (Moscow) 7:41-42.

Keywords: sanitation, immunization, protection, disinfection, duck, goose, Krasnodar territory, USSR

Notes: A description is given of a program to eliminate pasteurellosis from farmed ducks and geese in Krasnodar Territory, USSR.

884. Musa, M.T., S.M. ElSanousi and S.M. ElBashir. 1980. Death rate of Pasteurella multocida in formalized nutrient broth culture and its survival under different laboratory conditions. Sudan Journal of Veterinary Research 2:33-35.

Keywords: survival, inactivation, vaccine, storage, formalin, temperature

Notes: P.M. survived 12 days at 37C, 30 days at room temperature and two months at 4C. Adding 0.5 percent formalin to a broth culture killed P.M. within 50 minutes.

885. Mushin, R. and Y. Weisman. 1980. Serological untypable strains of Pasteurella multocida. Refuah Veterinarith 37(4):135-136.

Keywords: turkey, strain comparison, serotyping, antiserum

Notes: Sixteen diagnostic antisera failed to type twelve P.M. strains isolated from cases of avian cholera in turkeys.

886. Mushin, R., Y. Weisman and N. Singer. 1980. Pasteurella haemolytica found in the respiratory tract of fowl. Avian Diseases 24(1):162-168.

Keywords: related bacteria, chicken, P.haemolytica, respiratory tract, case report, detection, duck, carrier, normal flora, turkey

Notes: P. haemolytica may be part of the normal flora of the respiratory tract of chickens but not of turkeys or ducks. An incidence of 97 percent in the tracheal tract of chickens in 23 flocks was in contrast to its low incidence (three percent) in eight flocks of turkeys and three flocks of ducks.

887. Mushin, R. 1980. A study on bacteriocin typing of avian strains of *Pasteurella multocida*. Journal of Hygiene 85(1):59-63.

Keywords: serotyping, bacteriocin, strain comparison

Notes: A preliminary multicin typing system was developed with 52 percent of multicin-producing strains acting on only one indicator strain.

888. Mushin, R. 1979. Serotyping of *Pasteurella multocida* isolants from poultry. Avian Diseases 23(3):608-615.

Keywords: chicken, turkey, goose, serotyping, vaccine, strain comparison, serotype 1, serotype 3, agar gel immunodiffusion

Notes: Serotyping 607 P.M. strains isolated from poultry showed that serotypes 1 and 3 predominated.

889. Mushin, R., R. Bock and M. Abrams. 1977. Studies on *Pasteurella gallinarum*. Avian Pathology 6(4):415-423.

Keywords: serotyping, humoral immunity, agar gel immunodiffusion, strain comparison, antigenic cross-reaction, P.gallinarum, serotype 6, serotype 9, chicken, related bacteria

Notes: In one of two outbreaks of *P. gallinarum* infection in chickens, isolates were antigenically related to P.M. serotypes 6 and 9.

890. Mushin, R., J. Weisman and D. Perlman. 1976. A field study of levels of serum agglutinins in unvaccinated and vaccinated fowls against *Pasteurella multocida*. Refuah Veterinarith 33(2):47-54.

Keywords: turkey, goose, vaccine, humoral immunity, serology, agglutination, antibody

Notes: The quantitative agglutination test was found to be useful in diagnosis of avian cholera and in assessment of antibody levels in vaccinated flocks.

891. Mustafa, A.H.M. and M.A.H. Miah. 1985. Duck cholera in Bangladesh. Bangladesh Veterinary Journal 19(1/4):91-93.

Keywords: case report, duck, Bangladesh, India

Notes: (ONS)

892. Mustafa, A.H.M., M.A.H. Miah, K.K. Pandit and A.F.M.H. Hoque. 1985. Isolation of *Pasteurella anatipestifer* from ducks in Bangladesh. Bangladesh Veterinary Journal 14(1/4):73-76.

Keywords: related bacteria, case report, P.anatipestifer, duck, Bangladesh, India

Notes: (ONS)

893. Mutters, R., K. Piechulla, K.H. Hinz and W. Mannheim. 1985. *Pasteurella avium* (Hinz and Kunjara 1977) comb. nov. and *Pasteurella volantium* sp. nov. International Journal of Systematic Bacteriology 35(1):5-9.

Keywords: taxonomy, cross reaction, Haemophilus influenzae, Haemcphilus avium, DNA hybridization, P.avium, P.volantium, DNA, related bacteria

Notes: DNA hybridization showed that *Haemophilus avium* was composed of three DNA homology groups; these three groups were genetically closer to P.M. than to *Haemophilus influenzae*.

894. Mutters, R., P. Ihm, S. Pohl, W. Fredericksen and W. Mannheim. 1985. Reclassification of the genus *Pasteurella trevisan* 1887 on the basis of Deoxyribonucleic acid homology, with proposals for the new species *Pasteurella dagmatis*, *Pasteurella canis*, *Pasteurella stomatis*, *Pasteurella anatis*, and *Pasteurella langaa*. International Journal of Systematic Bacteriology 35(3):309-322.

Keywords: classification, taxonomy, DNA hybridization, DNA, P.langaa, P.stomatis, P.canis, P.anatis, P.dagmatis, strain comparison

Notes: (ONS)

895. Mwangota, A.U., S.I. Muhammed and R.G. Thomson. 1978. Serological types of *Pasteurella haemolytica* in Kenya. Cornell Veterinarian 68(1):84-93.

Keywords: Kenya, Africa, serotyping, related bacteria, P.haemolytica, strain comparison, biotype A, biotype T, chicken, wildebeest, reservoir

Notes: The 12 known serotypes of *P. haemolytica* and the two biotypes A and T were found in Kenya. Biotype T was more common in disease conditions than biotype A, which was more common in the nasal passages of healthy animals. Biotype A, serotype 2 was isolated from an adult wildebeest.

896. Myint, A., G.R. Carter and T.O. Jones. 1987. Prevention of experimental haemorrhagic septicaemia with a live vaccine. Veterinary Record 120(21):500-502.

Keywords: hemorrhagic septicemia, cattle, vaccine, immunization, deer, serotype 3, serotype B, serotype 4

Notes: A live deer-strain vaccine protected calves against challenge with P.M.. The live vaccine was more efficacious than an alum precipitated vaccine in protecting calves.

897. Nagarajan, V., S. Sundaram and K. Ramani. 1972. Evaluation of the potency of haemorrhagic septicemia alum precipitated vaccine by mouse protection test. Indian Veterinary Journal 49(11):1080-1083.

Keywords: buffalo, vaccine, mice, immunization, hemorrhagic septicemia, adjuvant

Notes: The white mouse was a suitable test animal to replace buffalo calves in evaluating hemorrhagic septicemia vaccines.

898. Nagy, L.K. and C.W. Penn. 1976. Protection of cattle against experimental haemorrhagic septicemia by the capsular antigens of Pasteurella multocida types B and E. Research in Veterinary Science 20(3):249-253.

Keywords: adjuvant, vaccine, serotype B, serotype E, antigen, capsular antigen, endotoxin, immunization, cattle, toxin, hemorrhagic septicemia

Notes: Aluminum hydroxide adjuvanted vaccines containing endotoxin-free capsular antigens of P.M. types B and E provided cattle with immunity.

899. Nagy, L.K. and C.W. Penn. 1974. Protective antigens in bovine pasteurellosis. Developments in Biological Standardization 26:25-32.

Keywords: passive immunity, cattle, mice, adjuvant, immunization, capsular antigen, antigen, antiserum, serotype B, serotype E

Notes: Animal immunization tests were run using the specific capsular antigens types B and E and the antisera produced against them.

900. Nakai, T., K. Kume, H. Yoshikawa, T. Oyamada and T. Yoshikawa. 1988. Adherence of Pasteurella multocida or Bordetella bronchiseptica to the swine nasal epithelial cell in vitro. Infection and Immunity 56(1):234-240.

Keywords: adherence, swine, cell culture, pathogenesis, atrophic rhinitis, related bacteria, Bordetella bronchiseptica, dermonecrotoxin, virulence

Notes: Colonization of Bordetella bronchiseptica and production of its dermonecrotoxin appeared to result in the production of mucosal damage. P.M. seemed to lack the ability to colonize normal swine nasal mucosa. Bordetella bronchiseptica and not P.M. was hypothesized to be the cause of swine atrophic rhinitis

901. Nakai, T. and K. Kume. 1987. Reconstruction of Pasteurella multocida dermonecrotoxin from three polypeptides. Federation of European Microbiological Societies Microbiology Letters 44(2):259-265.

Keywords: toxin, dermonecrotoxin, polypeptide fragment, pathogenesis

Notes: Whole P.M. dermonecrotic toxin molecule was reconstituted from three polypeptides: fragment a (molecular weight = 23,000), fragment b (molecular weight = 64,000) and fragment c (molecular weight = 74,000) in equimolar ratios. The restored molecule had the original dermonecrotizing activity. All three polypeptides were required for toxicity.

902. Nakai, T., A. Sawata, M. Tsuji, Y. Samejima and K. Kume. 1984. Purification of dermonecrotic toxin from a sonic extract of Pasteurella multocida SP-72 serotype D. Infection and Immunity 46(2):429-434.

Keywords: serotype D, dermonecrotoxin, guinea pig, mice, swine, atrophic rhinitis, toxin, pathogenesis

Notes: A procedure was developed to purify dermonecrotic toxin from a sonic extract of a serotype D strain of P.M.

903. Nakai, T., A. Sawata, M. Tsuji and K. Kume. 1984. Characterization of dermonecrotic toxin produced by serotype D strains of Pasteurella multocida. American Journal of Veterinary Research 45(11):2410-2413.

Keywords: Bordetella bronchiseptica, serotype D, guinea pig, mice, dermonecrotoxin, toxin, related bacteria, pathogenesis

Notes: The dermonecrotic toxin produced by serotype D strains of P.M. was serologically distinct from the dermonecrotic toxin produced by Bordatella bronchiseptica.

904. Namioka, S. 1978. Pasteurella multocida - biochemical characteristics and serotypes. Methods in Microbiology 10:271-292.

Keywords: capsule, serotyping, antigen, taxonomy, biochemical test, medium, culture, growth, virulence

Notes: The taxonomy, biological and biochemical characteristics, media composition, capsule staining, serotyping and protective antigens of P.M. are reviewed.

905. Namioka, S. 1973. Fowl cholera. Journal of the Japanese Society on Poultry Diseases 9:14-20.

Keywords: review, serotyping, control, prevention

Notes: (ONS)

906. Namioka, S. 1973. Serological studies on Pasteurella multocida especially on O-antigenic analysis of the organism. Contributions to Microbiology and Immunology 2:177-178.

Keywords: capsular antigen, review, serotyping, antigen, pathogenesis, capsule, virulence

Notes: Findings indicated that the capsular antigen serotypes of P.M. played an important role in the host-parasite relationship in avian cholera.

907. Namioka, S. 1970. Antigenic analysis of Pasteurella multocida. National Institute of Animal Health Quarterly 10 (supplement):97-108.

Keywords: antigen, strain comparison, somatic antigen, serotyping, review, pathogenicity, secondary infection

Notes: The typing of P.M. on the basis of somatic antigens into four serotypes is reviewed. The role of the organism as a secondary invader is emphasized.

908. Namioka, S., M. Murata and R.V.S. Bain. 1964. Serological studies on Pasteurella multocida. V. Some epizootiological findings resulting from O antigenic analysis. Cornell Veterinarian 54(4):520-534.

Keywords: serotyping, capsular antigen, cattle, ox, turkey, chicken, antigen, strain comparison, somatic antigen

Notes: Somatic antigenic analysis of P.M. cultures showed that three serotypes produced avian cholera.

909. Namioka, S. and D.W. Bruner. 1963. Serological studies on Pasteurella multocida. IV. Type distribution of the organisms on the basis of their capsule and O-groups. Cornell Veterinarian 53(1):41-53.

Keywords: somatic antigen, serotyping, virulence, chicken, swine, sheep, strain comparison

Notes: The distribution of P.M. serotypes and their pathogenicity for chickens was studied.

910. Namioka, S. and M. Murata. 1961. Serological studies on Pasteurella multocida. III. O antigenic analysis of cultures isolated from various animals. Cornell Veterinarian 50(4):522-528.

Keywords: serotyping, somatic antigen, colony morphology, strain comparison

Notes: Capsular serotyping of P.M. isolates from around the world was done.

911. Namioka, S. and M. Murata. 1961. Serological studies on Pasteurella multocida. I. A simplified method for capsule typing of the organism. Cornell Veterinarian 51(4):498-507.

Keywords: capsular antigen, serotyping, strain comparison, agglutination, antigen

Notes: Adaptation of the slide agglutination test to the typing of capsule antigens is described.

912. Namioka, S. and M. Murata. 1961. Serological studies on Pasteurella multocida. II. Characteristics of somatic (O) antigens of the organism. Cornell Veterinarian 51(4):507-521.

Keywords: capsular antigen, serotyping, strain comparison

Notes: The serological characteristics of the somatic (O) antigen of P.M. are described.

913. Nathanson, R.M., M.S. Hofstad and E.L. Jeska. 1981. Cyclophosphamide-induced immunosuppression demonstrated in Pasteurella multocida-vaccinated chickens. Avian Diseases 25(1):218-221.

Keywords: vaccine, immunization, cyclophosphamide, immunosuppression, chicken, antibody titer

Notes: Vaccinated, cyclophosphamide-treated chickens were more susceptible to infection and showed lower antibody titers than untreated chicks.

914. Nathanson, R.M., M.S. Hofstad and E.L. Jeska. 1980. Pasteurella multocida: antibody-mediated resistance to virulent challenge exposure in vaccinated turkeys. American Journal of Veterinary Research 41(8):1285-1287.

Keywords: bursectomy, turkey, passive immunity, vaccine, immunization, immunity, humoral immunity, bursa of Fabricius

Notes: Vaccinated, bursectomized turkeys were found to be more susceptible to intramuscular challenge than were vaccinated, nonbursectomized turkeys.

915. Nechaeva, N.M. 1955. The action of syntomycin on several stimulators of bacterial infections of animals and birds in experiments in vitro (Russian). Nauchnye Trudy, L'vovskii Gosudarst Zootekhnichesko-Veterinarnii Institute 1955(7):233-235.

Keywords: antibiotic, antibiotic sensitivity, treatment, syntomycin

Notes: (ONS)

916. Nelson, J. 1899. Bacteriological study of an intestinal disease of ducks, possibly cholera. Twentieth Annual Report of the New Jersey Agricultural College Experiment Station. 1899:299-309.

Keywords: case report, duck, chicken, growth, colony morphology

Notes: A bacillus was isolated from diseased ducks and chickens and its growth characteristics were noted. A "diarrhea mixture" consisting of rhubarb, powdered chalk and cayenne pepper reduced mortality. (Also published as the 12th Annual Report of the New Jersey Agriculture Experiment Station).

917. Nervig, R.M. and C.L. Egemo. 1985. Safety testing of Pasteurella multocida vaccines and bacterins in turkeys. Avian Diseases 29(1):256-257.

Keywords: vaccine, immunization, vaccine safety, turkey

Notes: P.M. vaccines and bacterins administered to healthy turkeys did not cause an increase in losses.

918. Neumann, R., G. Mehlhorn, I. Buchholz, U. Johannsen and D. Schimmel. 1987. Experimental studies of the effect of chronic aerogenous toxic gas exposure of unweaned piglets with ammonia of various concentrations. II. Reaction of cellular and humoral infection defence mechanisms of ammonia exposed unweaned piglets under conditions of experimental Pasteurella multocida infection with and without thermo-motor stress (German/E). Journal of Veterinary Medicine, Series B 34:241-253.

Keywords: stress, immunity, secondary effect, swine, ammonia, cellular immunity, humoral immunity

Notes: Exposure of piglets to ammonia reduced their systematic resistance to infection as well as local resistance to infection in the lungs.

919. Neumann, R., G. Mehlhorn, W. Leonhardt, P. Kastner, R. Willig, D. Schimmel and U. Johannsen. 1987. Experimental studies on the effect on unweaned pigs of aerogenous toxic gas stress, using ammonia of different concentrations. I. Clinical picture of ammonia-exposed piglets under the influence of Pasteurella multocida infection, with and without exposure to thermo-motor stress (German/E). Journal of Veterinary Medicine, Series B 34:183-196.

Keywords: swine, stress, ammonia, weight, secondary effect

Notes: Long-term exposure to ammonia alone did not affect the behavior or growth of piglets, but combined with P.M. infection and a thermo-motor stress (swimming), it caused a 20 to 30 percent reduction in weight.

920. Newman, P.R., R.E. Corstvet and R.J. Panciera. 1982. Distribution of Pasteurella haemolytica and Pasteurella multocida in the bovine lung following vaccination and challenge exposure as an indicator of lung resistance. American Journal of Veterinary Research 43(3):417-422.

Keywords: cattle, vaccine, immunization, lung, pathogenesis, P.haemolytica, location, detection, fluorescent antibody test

Notes: The relative number, location and integrity of homologous virulent Pasteurella species was determined in the lung of calves (vaccinated and controls) after intrapulmonic inoculation.

921. Nielsen, J.P., M. Bisgaard and K.B. Pedersen. 1986. Production of toxin in strains previously classified as Pasteurella multocida. Acta Pathologica, Microbiologica et Immunologica Scandinavica, Section B: 94(3):203-204.

Keywords: toxin, P.septica, P.avium, P.canis, swine, cattle, cat, dog, rabbit, turkey, atrophic rhinitis

Notes: Toxin production was only demonstrated in strains belonging to P.multocida ssp. multocida Toxigenic strains were derived from swine, calves, cats, dogs, rabbits, and turkeys.

922. Nikolaeva, G.I. 1976. The use of blood cells in vaccine production (Russian). Uchenye Zapiski Kazanskogo Gosudarstvennogo Veterinarnogo Instituta 123:64-68.

Keywords: cattle, buffalo, sheep, swine, chicken, culture, growth, medium, erythrocyte

Notes: A hydrolysate of cattle blood cells improved growth of P.M. and vaccines prepared from organisms grown on the cells were more effective than those using bacteria grown on normal medium.

923. Njindam, J.A.T. 1980. Animal health in Cameroon (French). Bulletin de l'Office International des Epizooties 92(11/12):1417-1425.

Keywords: case report, Africa, Cameroon

Notes: (ONS)

924. Nobrega, P. and R.C. Bueno. 1950. The influence of the temperature on the viability and virulence of Pasteurella avicida (Portugese/E). Boletin da Sociedade Paulista de Medicina Veterinaria 8(4):189-194.

Keywords: P.avicida, survival, temperature, storage

Notes: P. avicida cultures kept at temperatures ranging from 2 to 4C showed a reduction in viability to 0 percent after one year and a 40 percent reduction when stored at 37C for one year.

925. Noel, G.J. and D.W. Teele. 1986. In vitro activities of selected new and long-acting cephalosporins against Pasteurella multocida. Antimicrobial Agents and Chemotherapy 29(2):344-345.

Keywords: ceftriaxone, cefixime, antibiotic, cephalosporin, treatment, antibiotic sensitivity

Notes: Broad-spectrum cephalosporins, including ceftriaxone and defixime, showed very good in vitro activities against 15 P.M. isolates tested.

926. Noerrung, V. and N. Tornoee. 1979. Vaccination of fowls against pasteurellosis (Danish). Dansk Veterinaertidsskrift 62(6):319-320.

Keywords: vaccine, formalin, immunization, chicken

Notes: A formalized P.M. vaccine was resonably effective in the prevention of avian cholera.

927. Novikov, A. 1954. Migrating rooks as carriers of fowl cholera (Russian). Veterinariya (Moscow) 31:27.

Keywords: carrier, rook, crow, reservoir, transmission

Notes: (ONS)

928. Novikov, A.P. 1956. Staining the stimulator of cholera in birds (Russian). Veterinariya (Moscow) 6:80-81.

Keywords: detection, diagnosis, staining technique

Notes: A biochemical stain for P.M. is reported.

929. O'Brien, J.K. and W.P.H. Duffus. 1987. Pasteurella haemolytica cytotoxin: relative susceptibility of bovine leucocytes. Veterinary Microbiology 13(4):321-334.

Keywords: leukocyte, neutrophil, cellular immunity, toxin, lipopolysaccharide, related bacteria, P.haemolytica, cattle, macrophage, parainfluenza-3 virus

Notes: Bovine neutrophils were more sensitive to P. haemolytica cytotoxin than were mammary or bronchoalveolar macrophages. Neutrophils and macrophages induced with lipopolysaccharide were as sensitive as homologous untreated cells.

930. Oberhofer, T.R. 1981. Characteristics and biotypes of Pasteurella multocida isolated from humans. Journal of Clinical Microbiology 13(3):566-571.

Keywords: identification, bite, man, biochemical test, strain comparison, dog, cat

Notes: Forty-eight strains of P.M. and four strains of atypical Pasteurella were identified by conventional and commercial test systems.

931. Oddo, A.F., R.D. Pagan, L. Worden and R.G. Botzler. 1978. The January 1977 avian cholera epornitic in northwest California. Journal of Wildlife Diseases 14(3):317-321.

Keywords: case report, California, ruddy duck, Oxyura jamaicensis, Egretta thula, snowy egret, Arcata oxidation ponds, green-winged teal, Fulica americana, American coot, shoveler, whistling swan, widgeon, Olor columbianus, Anas acuta, Anas americana, Anas clypeata, Anas platyrhynchos, gadwall, Anas strepera, Anas crecca carolinensis, host range, wild bird, waterfowl, swan, duck, goose, teal, egret, mallard

Notes: An avian cholera outbreak in Northern California began with coots dying. This is the first reported case of avian cholera in a snowy egret.

932. Ojo, M.O. 1975. Caprine pneumonia. III. Biochemical characterization and serological types of Pasteurellae. Nigerian Journal of Animal Production 2(2):216-221.

Keywords: goat, serotyping, strain comparison, P.haemolytica, Africa, Nigeria, biochemical test, classification, serotype D, related bacteria

Notes: Isolates of P. haemolytica and P.M. from goats were identified by biochemical and serological methods. All eight isolates of P.M. were type D.

933. Ojo, M.O. 1971. Studies on Pasteurella species isolated from cases of kerato-conjunctivitis of poultry in the Western State of Nigeria. Bulletin of Epizootic Diseases of Africa 19(4):357-363.

Keywords: strain comparison, chicken, Nigeria, Africa, kerato-conjunctivitis, P.gallinarum, related bacteria

Notes: Cultural and biochemical tests on 24 Pasteurella strains isolated from swabs of affected eyes showed that the strains fell into two clearly defined groups, one having the characteristics of P. gallinarum, and the second having those of P.M.

934. Okerman, L. and L.A. Devriese. 1987. Failure of oil adjuvants to enhance immunity induced in mice by an inactivated rabbit Pasteurella multocida vaccine. Vaccine 5(4):315-318.

Keywords: adjuvant, mice, vaccine, immunity, rabbit

Notes: Killed whole cell vaccines adjuvanted with mineral oil did not confer better protection to mice against death than non-adjuvanted suspensions, even when challenged after three months. Very good protection was obtained when the non-adjuvanted suspension was administered twice.

935. Okerman, L. and L. Spanoghe. 1980. Immunity induced in mice by Pasteurella multocida strains isolated from rabbits. Zentralblatt fur Veterinarmedizin, Reihe B 27(9/10):759-763.

Keywords: immunization, rabbit, mice, cross protection, vaccine

Notes: Cross-immunity was induced in mice by six strains of P.M. isolated from rabbits.

936. Okerman, L., L. Spanoghe and R.M. DeBruycker. 1979. Experimental infections of mice with Pasteurella multocida strains isolated from rabbits. Journal of Comparative Pathology 89:51-55.

Keywords: strain comparison, mice, rabbit, virulence, colony morphology

Notes: Twenty isolates of P.M. from domestic rabbits were studied for their pathogenicity in mice.

937. Okoh, A.E.J. 1980. An outbreak of pasteurellosis in Kano zoo. Journal of Wildlife Diseases 16(1):3-5.

Keywords: case report, Taarotragus oryx, host range, wild bird, Terathopius ecaudatus, Connochaetes taarinus albojubatus, eland, gnu, zebra, Macropus rufus, Struthio camelus camelus, kangaroo, ostrich, bateleur eagle, zoo, raptor, eagle

Notes: Pasteurellosis occurred in a zoo in Nigeria and caused the death of elands, a gnu, a zebra, kangaroos, an ostrich, and a bateleur eagle.

938. Olsen, I., S.K. Rosseland, A.K. Thorsrud and E. Jellum. 1987. Differentiation between Haemophilus paraphrophilus, H. aphrophilus, H. influenzae, Actinobacillus actinomycetemcomitans, Pasteurella multocida, P. haemolytica, and P. ureae by high resolution two-dimensional electrophoresis. Electrophoresis 8(11):532-535.

Keywords: differentiation, Haemophilus paraphrophilus, Haemophilus influenzae, Haemophilus aphrophilus, Actinobacillus actinomycetemcomitans, P.haemolytica, P.ureae, identification, electrophoresis, strain comparison, protein, taxonomy

Notes: The cellular proteins of the closely related bacteria were analyzed by high resolution two-dimensional protein electrophoresis and silver staining. The patterns of the three Pasteurella species differed markedly.

939. Olson, L.D. and G.T. Schlink. 1986. Onset and duration of immunity and minimum dosage with CU cholera vaccine in turkeys via drinking water. Avian Diseases 30(1):87-92.

Keywords: turkey, vaccine, immunization

Notes: Growing turkeys were partly protected against avian cholera four days after vaccination with the live Clemson University strain of P.M.

940. Olson, L.D. 1981. Ophthalmia in turkeys infected with Pasteurella multocida. Avian Diseases 25(2):423-430.

Keywords: hypopyon, blepharoconjunctivitis, heterophil, lymphocyte, keratitis, turkey, clinical sign, eye, pathogenesis

Notes: Eye infections in turkeys occurred in two outbreaks of avian cholera.

941. Olson, L.D. 1980. Accidental penetration of hands with virulent and avirulent Pasteurella multocida of turkey origin. Avian Diseases 24(4):1064-1066.

Keywords: accident, contamination, man, host range, vaccine, hypodermic needle, needle stick

Notes: In two accidents, hypodermic needles contaminated with P.M. punctured the hands of two people. One accident produced a severe inflammatory reaction and the other a mild reaction.

942. Olson, L.D. 1977. Evaluation of two avirulent vaccines for preventing experimental fowl cholera in turkeys, and use of one vaccine in the field. Avian Diseases 21(2):178-184.

Keywords: vaccine, immunization, arthritis, cranial infection, location, sulfonamide, sulfadimethoxine, antibiotic, carrier

Notes: The Clemson University live vaccine administered in water was effective in immunizing turkeys against the pulmonary, arthritic, and cranial forms of fowl cholera. The Missouri strain immunized turkeys against the pulmonary and septicemic forms of fowl cholera.

943. Olson, L.D. 1977. Inexpensive collapsible covered pen with slatted floor for turkeys. Avian Diseases 21(2):310-314.

Keywords: general, cage design, turkey

Notes: A collapsible pen designed to confine turkeys for avian cholera research is described.

944. Olson, L.D. 1977. Comparison of low-level Rofenaid, low-level chlortetracycline, and vaccination with commerical bacterin for preventing pulmonary form of fowl cholera in turkeys. Avian Diseases 21(2):160-166.

Keywords: turkey, treatment, sulfonamide, antibiotic, sulfadimethoxine, chlortetracycline, vaccine, immunization, carrier, transmission

Notes: Turkeys treated with Rofenaid and/or vaccinated survived significantly better than untreated turkeys when exposed to P.M.

945. Olson, L.D. 1977. Evaluation of aureomycin for prevention of arthritic pulmonary and cranial forms of fowl cholera in turkeys. Poultry Science 56(4):1102-1106.

Keywords: treatment, turkey, chlortetracycline, arthritis, carrier, location, cranial infection, aureomycin

Notes: An increase in survival was proportional to the level of chlortetracycline in the feed. No carriers were detected three weeks after exposure to P.M.

946. Olson, L.D. 1977. Evaluation of Rofenaid and a commercial bacterin for prevention of cranial form of fowl cholera in turkeys. Poultry Science 56(4):1098-1101.

Keywords: treatment, antibiotic, turkey, cranial infection, vaccine, sulfadimethoxine, immunization, ormetoprim

Notes: A combination of vaccination with a commercial bacterin and 0.01 percent potentiated sulfadimethoxine (Rofenaid), and vaccination separately, significantly increased survival of turkeys experimentally infected with the cranial form of avian cholera.

947. Olson, L.D., P.D. Garrett and R.E. Bond. 1974. Anatomic study of the auditory tube in the turkey head. American Journal of Veterinary Research 35(6):811-815.

Keywords: transmission, cranial infection, anatomy, auditory tube, turkey, pathogenesis

Notes: The anatomic arrangement of the auditory tube in turkeys and how it relates to avian cholera is described.

948. Olson, L.D., J.M. Donahue and R.E. Bond. 1972. Comparison of three levels of a mixture of sulfadimethoxine and ormetoprim for prevention of fowl cholera in turkeys exposed via the palatine sinuses. Avian Diseases 16(4):687-691.

Keywords: antibiotic, sulfonamide, sulfadimethoxine, ormetoprim, treatment, turkey, cranial infection, torticollis

Notes: Feeding of Rofenaid at a concentration of 0.02 or 0.04 percent increased survival, and at 0.04 percent, also decreased the incidence of torticollis and skull lesions as compared to unmedicated infected controls.

949. Olson, L.D. 1970. A comparison of the growth of various microorganisms in air spaces of the turkey head. Avian Diseases 14(4):676-682.

Keywords: pathology, clinical sign, cranial infection, related bacteria, turkey

Notes: Seven species of bacteria and one species of fungus were inoculated via the eustachian tube to determine if other microogranisms would produced cranial lesions similar to avian cholera.

950. Olson, L.D., E.L. McCune and R.E. Bond. 1969. Comparison of commercial and autogenous bacterins for control of the cranial form of fowl cholera in turkeys. Avian Diseases 13:252-260.

Keywords: vaccine, immunization, turkey, cranial infection, portal of entry, eustachian tube, torticollis

Notes: Commercial and autogenous bacterins produced clinical patterns similar to those found under field conditions.

951. Olson, L.D. and E.L. McCune. 1968. Experimental production of the cranial form of fowl cholera in turkeys. American Journal of Veterinary Research 29(8):1665-1673.

Keywords: transmission, cranial infection, turkey, eustachian tube, portal of entry, pathogenesis

Notes: The most likely route of infection of the air spaces of the head of the turkey appeared to be through the eustachian tube.

952. Olson, L.D. 1966. Gross and histopathological description of the cranial form of chronic fowl cholera in turkeys. Avian Diseases 10(4):518-529.

Keywords: turkey, pathology, cranial infection, location

Notes: The gross and histopathological study of the skulls of 15 turkeys infected with the cranial form of avian cholera is reported.

953. Omar, A.R., Cheah Phee Phay and C.S. Shanta. 1962. The isolation of a virulent strain of Pasteurella multocida from an apparently healthy buffalo. British Veterinary Journal 118:71-73.

Keywords: buffalo, natural immunity, hemorrhagic septicemia, cattle

Notes: This isolation supported the hypothesis that an arrested infection was the cause of the naturally acquired immunity to hemorrhagic septicemia in cattle and buffalo.

954. Omar, M.A.K., B. Dayal and P.C. Appelbaum. 1980. Pasteurella multocida septicaemia complicating Felty's syndrome. South African Medical Journal 58:257-258.

Keywords: man, host range, Felty's syndrome, arthritis, case report

Notes: An unusual case of septicemia due to P.M. in a human and its occurence in the absence of trauma is presented.

955. Ose, E.JE. and O.A. Muenster. 1968. A method for evaluation of vaccines containing Pasteurella multocida. American Journal of Veterinary Research 29(9):1863-1866.

Keywords: mice, cross protection, vaccine, immunization

Notes: The vaccination of mice and subsequent challenge of their immunity with serial logarithmic (base 10) dilutions of P.M. was studied.

956. Ostle, A.G. and C.J. Welter. 1987. Cross-protection in swine between toxigenic Pasteurella multocida serotypes A and D. Agri-Practice 8(7):23-26.

Keywords: serotype A, serotype D, cross protection, swine, dermonecrotoxin, toxin, vaccine, immunization, Bordetella bronchiseptica

Notes: The dermonecrotic toxin reported in both A and D serotypes was related serologically and antigenically as well as functionally.

957. Oudar, J., L. Joubert, M. Prave, C. Dickele and J.C. Munoz-Trana. 1973. Buccal carrying of Pasteurella multocida in the cat: epidemiological, biochemical and serological study (French/E). Bulletin de la Societe des Sciences Veterinaires et de Medecine Comparee de Lyon 74(5):353-357.

Keywords: cat, carrier, reservoir, bite, serotyping, strain comparison

Notes: (ONS)

958. Pabs-Garnon, L.F. and M.A. Soltys. 1971. Multiplication of Pasteurella multocida in the spleen, liver and blood of turkeys inoculated intravenously. Canadian Journal of Comparative Medicine 35(2):147-149.

Keywords: pathogenesis, location, turkey

Notes: The numerical increase of P.M. in the liver, spleen and blood was monitored from the time of injection until the death of the turkey.

959. Pabs-Garnon, L.F. and M.A. Soltys. 1971. Methods of transmission of fowl cholera in

turkeys. American Journal of Veterinary Research 32(7):1119-1120.

Keywords: transmission, turkey, reservoir, water

Notes: Contaminated water was shown to be probable source of infection of turkeys with P.M.

960. Padanyi, M. and I. Wiener. 1967. Method of active immunization combined with therapeutic treatment in ducks infected with fowl cholera (Czechoslovakian/E). Magyar Allatorvosok Lapja 22(4):147-151.

Keywords: vaccine, immunization, sulfaquinoxaline, duck, sulfonamide

Notes: Immunization with a vaccine containing sulfaquinoxalin provided protection to ducks when exposed to P.M.

961. Padanyi, M. and B. Toth. 1967. Studies on the determination of the therapeutic and toxic dose of suphaquinoxaline in fowls experimentally infected with fowl cholera (Czechoslovakian/E). Magyar Allatorvosok Lapja 22(4):152-156.

Keywords: treatment, antibiotic, chicken, sulfaquinoxaline, sulfonamide

Notes: The effective therapeutic level and the toxic level of sulfaquinoxaline were determined for chickens.

962. Panda, S.N., B. Misra, B.C. Das and B.C. Nayak. 1981. An outbreak of avian pasteurellosis in Orissa. Indian Veterinary Journal 58(5):418-420.

Keywords: case report, India, chicken, wattle edema, vaccine, control, treatment

Notes: An outbreak of avian cholera on a poultry breeding farm in India is reported.

963. Panigrahy, B. and B.G. Harmon. 1985. Bacterial septicemias in two psittacine birds. Journal of the American Veterinary Medical Association 186(9):983-984.

Keywords: case report, host range, Anodorhynchus hyacinthinus, transmission, red-fronted conure, bite, Aratinga wagleri, cat, serotype 3, hyacinth macaw, Escherichia coli, parrot, reservoir

Notes: P.M. type 3 was isolated from a dead red-fronted conure that was bitten two weeks previously by a cat.

964. Panigrahy, B., J.E. Grimes, S.E. Glass, S.A. Naqi and C.F. Hall. 1982. Diseases of pigeons and doves in Texas: clinical findings and recommendations for control. Journal of the American Veterinary Medical Association 181(4):384-386.

Keywords: pigeon, Columba livia, case report, host range, dove

Notes: Between September 1974 and August 1981, one pigeon out of 153 necropsied was diagnosed as having avian cholera.

965. Panigrahy, B. and S.E. Glass. 1982. Outbreaks of fowl cholera in quail. Avian Diseases 26(1):200-203.

Keywords: case report, host range, pharaoh quail, bobwhite quail, sulfaquinoxaline, Coturnix coturnix, treatment, antibiotic, serotype 3, Colinus virginianus, quail, sulfonamide

Notes: Acute avian cholera, causing high mortality, was diagnosed in one flock of pharaoh quail and two flocks of bobwhite quail. Treatment with 0.05 percent sulfaquinoxaline in drinking water for two days was effective.

966. Panigrahy, B. and C.F. Hall. 1977. An outbreak of erysipelas in coturnix quails. Avian Diseases 21(4):708-710.

Keywords: case report, Erysipelas, coturnix quail, quail, host range, Salmonella typhimurium, Staphylococcus aureus, related bacteria

Notes: An outbreak of erysipelas with high mortality was observed in Coturnix breeder quails.

967. Park, N.Y. 1982. Disseminated intravascular coagulation in experimental fowl cholera of chickens. Korean Journal of Veterinary Research 22(2):211-219.

Keywords: chicken, secondary effect, pathology, coagulation, disseminated intravascular coagulation

Notes: (ONS)

968. Parry, R.T. 1966. Pasteurella infections in poultry. Poultry Review 6(3):43-50.

Keywords: classification, review, general, carrier

Notes: Various aspects of avian cholera are included in this review.

969. Partadiredja, M., H. Fachriyan and C.S.U. Pasaribu. 1979. Pasteurella multocida infection of ducks in Bogor (Indonesian/E). Media Veteriner 1(2):27-30.

Keywords: duck, Indonesia, case report, treatment, antibiotic, sulfonamide

Notes: Avian cholera was diagnosed for the first time in ducks in Indonesia. The clinical signs and the isolation procedures used are described.

970. Pasteur, L. 1880. On infectious diseases, particularly the disease commonly called fowl cholera (French). Comptes Rendus de L'Academie des Sciences 90:239-248.

Keywords: chicken, transmission, pathology

Notes: Some early observations on avian cholera as an infectious disease are given.

971. Pasteur, L. 1880. The attenuation of the fowl cholera organism (French). Comptes Rendus de L'Academie des Sciences 91(17):673-680.

Keywords: vaccine, virulence, chicken

Notes: This article is one of the first reports of the attenuation of virulence of a bacterium.

972. Pasteur, L. 1880. Fowl cholera: Study on conditions causing the non-reoccurence of the disease and on some other of its characteristics (French). Comptes Rendus de L'Academie des Sciences 90:1030-1033.

Keywords: vaccine, immunization, chicken

Notes: Some of the earliest observations of the ability to vaccinate against avian cholera are presented.

973. Patrascu, I.V. 1982. Use of live, apathogenic vaccines for control of salmonellosis and pasteurellosis in chickens (Rumanian). Revista de Cresterea Animalelor 32(12):38-40.

Keywords: vaccine, capsule, immunity, prevention, Rumania

Notes: A non-encapsulated isolate of P.M., which lacked pathogenicity for chickens, proved to be an effective immunizing agent.

974. Patton, J.W. 1926. Avian hemorrhagic septicemia (fowl cholera). Journal of the American Veterinary Medical Association 21(5):581-602.

Keywords: general, transmission, diagnosis, review

Notes: An early review of avian cholera is given, including distribution, etiology, source and mode of infection, and pathogenesis.

975. Paul, I. 1964. The hepatic and biliar blade modifications due to avian pasteurellosis (Hungarian/E). Lucrarile Stiintifice ale Institutului Patologie si Igiena Animala 7:333-342.

Keywords: liver, chicken, pathology

Notes: The histopathology of avian cholera in chickens of various ages was studied, emphasizing "milliar necrotic hepatitis".

976. Paullin, D.G. 1987. Cannibalism in American coots induced by severe spring weather and avian cholera. The Condor 89:442-443.

Keywords: transmission, weather, wild bird, host range, Fulica americana, cannibalism, American coot, waterfowl, environment, duck, stress

Notes: Severe cold weather resulted in coot mortality from starvation and avian cholera. A limited food supply forced surviving coots to resort to cannibalism.

977. Pedersen, K.B. and K. Barfod. 1982. Effect on the incidence of atrophic rhinitis of vaccination of sows with a vaccine containing Pasteurella multocida toxin. Nordisk Veterinaermedicin 34(7/9):293-302.

Keywords: atrophic rhinitis, swine, vaccine, toxin, immunization, Bordetella bronchiseptica, pathology

Notes: Pigs inoculated with Bordetella bronchiseptica and a toxigenic strain of P.M.developed severe progressive atrophic rhinitis corresponding to the natural disease. The effect of vaccination on the incidence of nasal lesions was studied.

978. Pena, M.R. 1972. Incidence of poultry diseases between 1968 and 1971 (Spanish). Revista de Medicina Veterinaria (Buenos Aires) 53(4):329-331.

Keywords: case report, Argentina, chicken

Notes: (ONS)

979. Penn, C.W. and L.K. Nagy. 1976. Isolation of a protective, non-toxic capsular antigen from Pasteurella multocida, type B and E. Research in Veterinary Science 20(1):90-96.

Keywords: capsular antigen, antigen, endotoxin, serotype B, serotype E, adjuvant, immunization, passive immunity, hemorrhagic septicemia, antigen extraction

Notes: Separation of the capsular antigen and endotoxin from saline extracts of P.M. type B and type E was achieved by the polar organic solvent fractionation method.

980. Penn, C.W. and L.K. Nagy. 1974. Capsular and somatic antigens of Pastuerella multocida types B and type E. Research in Veterinary Science 16(2):251-259.

Keywords: antigen, serotype B, serotype E, capsular antigen, endotoxin, agar gel immunodiffusion, immunoelectrophoresis, strain comparison

Notes: Saline and phenol-water extracted antigens of P.M. types B and E were studied with immunodiffusion and electrophoresis.

981. Pennings, A.M.M.A. and P.K. Storm. 1984. A test in Vero cell monolayers for toxin production by strains of Pasteurella multocida isolated from pigs suspected of having atrophic rhinitis. Veterinary Microbiology 9(5):503-508.

Keywords: endotoxin, Vero cells, toxin detection, swine, virulence, guinea pig, atrophic rhinitis, toxin, strain comparison

Notes: P.M. isolates were screened for their ability to produce toxin and to cause atrophic rhinitis in swine by exposing Vero cells to culture supernatants.

982. Percy, D.H., J.F. Prescott and J.L. Bhasin. 1985. Pasteurella multocida infection in the domestic rabbit: immunization with a streptomycin-dependent mutant. Canadian Journal of Comparative Medicine 49(2):227-230.

Keywords: rabbit, vaccine, streptomycin dependance, antibiotic, mutant, streptomycin, serotype 12A

Notes: Vaccinated rabbits challenged with the parent strain showed a more rapid nasal clearance of the organism than the vaccinated group challenged with the heterologous strain,but the number of positive cultures of P.M. recovered from tissues post-challenge were similar.

983. Peric, M. 1983. Prophylactic activity of a sulphadimidine-ormetoprim mixture against experimentally induced fowl cholera in chickens (Serbo-Croatian/E). Veterinarski Arhiv 53(Supplement):S52-S53.

Keywords: antibiotic, prophylaxis, control, prevention, sulfadimidine, ormetoprim, treatment, sulfonamide

Notes: A mixture of a 5:3 ratio of sulfadimidine and ormetoprim fed to chickens at a dosage of 0.02 percent completely prevented mortality from challenge with P.M.

984. Perreau, P. 1976. Immunization of swine against Pasteurella multocida bacteria infections and respiratory mycoplasmosis (French/E). Recueil de Medecine Veterinaire 152(3):203-208.

Keywords: immunization, serotype A, serotype D, mycoplasma, swine, respiratory disease, vaccine

Notes: Immunization of piglets against P.M. is discussed.

985. Perreau, P. and J.P. Petit. 1963. Glycolipid antigen of Pasteurella multocida type E. Revue d'Elevage et de Medicin Veterinaire des Pays Tropicaux 16(1):5-18.

Keywords: strain comparison, serotype E, glycolipid antigen, hemagglutination, Africa, lipopolysaccharide, endotoxin, toxin

Notes: A glycolipid antigen with the general characteristics of an endotoxin was isolated from an African isolate of P.M. type E.

986. Perreau, P. 1961. Pasteurella multocida (Robert's type 1) capsular antigen and anti-foam silicones (French/E). Annales de L'Institute Pasteur 101(6):977-980.

Keywords: anti-foam agent, capsular antigen, fermenter, capsule, antigen

Notes: One anti-foaming agent did not inhibit the formation of capsules in shaken, aerated cultures.

987. Perreau, P. 1961. A contribution to the study of immunology in Pasteurella multocida infections. The existance and importance of a sub-group B, the cause of bovine pasteurellosis in Africa (French/E). Revue d'Elevage et de Medicin Veterinaire des Pays Tropicaux 14:245-256.

Keywords: cattle, Africa, serotyping, serotype B, serotype 1, strain comparison, hemorrhagic septicemia

Notes: An African type of P.M. which differed antigenically from the classical type 1 was isolated from dead cattle.

988. Person, J.M. 1986. Epidemiology of Pasteurella infection in domestic carnivores and in some

wild animal species (French). Medecine et Maladies Infectienses 16:18-22.

Keywords: review, cat, dog

Notes: (ONS)

989. Pestana de Castro, A.F., P. Perreau, A.C. Rodrigues and M. Simoes. 1980. Hemagglutinating properties of Pasteurella multocida type A strains isolated from rabbits and poultry. Annales de Microbiologie (Institute Pasteur) 131A(3):255-263.

Keywords: hemagglutination, virulence, fimbriae, rabbit, chicken, serotype A, erythrocyte

Notes: Thirty-one type A strains of P.M. isolated from rabbits and poultry agglutinated human blood type O erythrocytes.

990. Peterson, E.H. 1960. Relative activity of the broad-spectrum antibiotics in birds as measured by clinical effect. Poultry Science 39(4):960-970.

Keywords: treatment, chlortetracycline, oxytetracycline, Eimeria, coccidiosis, antibiotic, chicken

Notes: Chlortetracycline and oxytetracycline were tested with and without potentiation against cecal and intestinal coccidiosis and avian cholera in experimental chicks.

991. Peterson, E.H. 1949. Sulfas win the battle with cholera. Turkey World May 1949:15-17.

Keywords: antibiotic, treatment, turkey, sulfonamide, sulfamethazine, sulfamerizine, sulfaquinoxaline

Notes: Sulfonamides were effective against certain diseases of turkeys, particularly coccidiosis and avian cholera.

992. Peterson, E.H. 1948. Sulfonamides in the prophylaxis of experimental fowl cholera. Journal of the American Veterinary Medical Association 113:263-266.

Keywords: antibiotic, sulfonamide, treatment, turkey, sulfamethazine, sulfadiazine, sulfathiazole, sulfanilamide, sulfamerizine

Notes: Sulfonamides were effective in the prophylaxis of experimental avian cholera when administered in the drinking water.

993. Petkov, A. and L. Karaivanov. 1976. Antagonistic activity of Pseudomona aeruginosa toward Pasteurella multocida strains (Bulgarian/E). Veterinarno-Meditsinski Nauki 13(8):86-90.

Keywords: Pseudomonas aeruginosa, antibiotic, growth inhibition, antagonism, related bacteria, bacteriocin

Notes: Four strains of Pseudomonas aeruginosa produced a substance that was bactericidal for P.M. during growth on solid agar.

994. Petricevic, S. 1981. Pasteurellosis of poultry, cattle and swine. I. Properties and enzyme activity of Pasteurella multocida strains isolated in Croatia (Serbo-Croatian). Praxis Veterinaria 29(5/6):397-402.

Keywords: Yugoslavia, chicken, cattle, swine, strain comparison, biochemical test

Notes: The cultural and biochemical characterization of P.M. strains isolated in Yugoslavia is presented.

995. Petrides, G.A. and C.R. Bryant. 1951. An analysis of the 1949-50 fowl cholera epizootic in Texas Panhandle waterfowl. Transactions of the North American Wildlife Conference 16:193-216.

Keywords: sigmodon cotton rat, Onychomys, grasshopper mouse, Rattus norvegicus, Norway rat, Mus musculus, house mouse, chicken, lesser Canada goose, Branta canadiensis leucopareia, temperature, wind, green-winged teal, Anas crecca, pintail, Anas acuta, baldpate, case report, environment, stress, host range, wild bird, Mareca americana, mallard, Anas platyrhynchos, shoveler, Spatula clypeata, American coot, Fulica americana, ruddy duck, Oxyura jamaicensis, lesser scaup, Nyroca affinis, water level, weather, diet, transmission, carrier, density, rat, mice, reservoir, waterfowl, goose, scaup

Notes: The interactions of various factors, including bird population densities, weather conditions, water levels, bird body size, diet, and persistance of P.M. are discussed.

996. Petrov, D. 1975. Studies on the gamasid red mite of poultry, Dermanyssus gallinae, as a carrier of Pasteurella multocida (Bulgarian/E). Veterinarno-Meditsinski Nauki 12(5):32-36.

Keywords: transmission, vector, mite, Dermanyssus gallinae, reservoir, red mite

Notes: (ONS)

997. Petrov, D. 1970. On the carriage of *Pasteurella multocida* by *Argas persicus* (Bulgarian/E). Veterinarno-Meditsinski Nauki 7(3):11-16.

Keywords: tick, vector, reservoir, carrier, sanitation, control, temperature, Argas persicus,verticaltransmission,transmission, parasite

Notes: Virulent P.M. survived in the tick for 33 days at 30C and for 100 days at 4C. Transovarial and transphase passage of the bacterium were not shown. Carriage of the bacterium in ticks should be considered in avian cholera control efforts.

998. Petrov, O.V. 1977. Testing the immunogenicity of *Pasteurella* antigens in mice (Russian). Byulleten Vsesoyuznogo Instituta Eksperimental'noi Veterinarii 28:50-53.

Keywords: mice, vaccine, immunization, antigen extraction

Notes: Mice were used to determine the immunogenicity of antigenic extracts of P.M.

999. Petrov, O.V. 1972. Some data on the structure and properties of O-antigens of *Pasteurella multocida* (Russian). Trudy Vsesoyuznogo Instituta Eksperimental'noi Veterinarii 40:366-371.

Keywords: somatic antigen, structure

Notes: The somatic antigens of P.M. were analyzed

1000. Petrov, O.V. 1971. On several cultural, morphological and biochemical properties of *Pasteurella multocida* (Russian). Veterinarya (Moscow) 10:116-119.

Keywords: growth, isolation, biochemical test, medium, identification

Notes: The growth characteristics of P.M. useful for its identification are reviewed.

1001. Petrovic, M., M. Krstic, M. Gancic, Z. Plecas and J. Rodic. 1970. Occurrence of pasteurellosis on poultry farms (Serbo-Croatian/E). Veterinaria (Sarajevo) 1:151-154.

Keywords: turkey, chicken, antibiotic, serum, eradication, control, Yugoslavia

Notes: Difficulty in the control of avian cholera in chickens and turkey farms in Yugoslavia is reported.

1002. Philippon, A., B. Joly, D. Reynaud, G. Paul, J.L. Martel, D. Sirot, R. Cluzel and P. Nevot. 1986. Characterization of a beta-lactamase from *Pasteurella multocida*. Annales de L'Institute Pasteur/Microbiologie 137A(2):153-158.

Keywords: antibiotic resistance, beta-lactamase, amoxicillin, ticarcillin, antibiotic, beta-lactam antibiotic

Notes: A beta-lactamase produced by a bovine strain of P.M. increased minimal inhibitory concentrations of amoxicillin and ticarcillin for this strain.

1003. Phillips, M. and R.B. Rimler. 1984. Protection of chickens by ribosomal vaccines from *Pasteurella multocida*: dependence on homologous lipopolysaccharide. American Journal of Veterinary Research 45(9):1785-1789.

Keywords: vaccine, immunization, lipopolysaccharide, ribosome, chicken, capsule, capsular antigen

Notes: Chickens were protected against avian cholera by ribosomal vaccines prepared from non-encapsulated P.M.

1004. Phillips, M., R.B. Rimler and P.A. Rebers. 1981. Failure of ribosomes from nonencapsulated *Pasteurella multocida* to protect CF-1 mice. American Journal of Veterinary Research 42(10):1769-1774.

Keywords: vaccine, immunization, ribosome, mice, lipopolysaccharide, capsule

Notes: Monomeric ribosomes were isolated and purified from nonencapsulated P.M. and were found to not impart protective immunity to challenge with encapsulated P.M.

1005. Phillips, M. and P.A. Rebers. 1978. Isopycnic characterization of lipopolysaccharides from *Pasteurella multocida*. Analytical Biochemistry 85(1):265-270.

Keywords: lipopolysaccharide, density gradient centrifugation, capsule, capsular antigen, antigen, antigenicity, antigen extraction

Notes: Isopycnic density gradient centrifugation procedures were used to analyze material obtained from the Westphal phenol extraction procedure of P.M. cells to establish the chemical basis of immunological specificity of P.M. lipopolysaccharides.

1006. Piechulla, K., M. Bisgaard, H. Gerlach and W. Mannheim. 1985. Taxonomy of some recently described avian *Pasteurella*/*Actinobacillus*-like organisms as indicated by deoxyribonucleic acid relatedness. Avian Pathology 14:281-311.

Keywords: DNA, host range, parakeet, parrot, pigeon, related bacteria, taxonomy, Actinobacillus, DNA hybridization, strain comparison

Notes: Co-evaluation of genetic relatedness and phenotypic features of avian *Pasteurella*/*Actinobacillus*-like isolates revealed diagnostically useful criteria.

1007. Pier, A.C. 1973. Effects of aflatoxin on immunity. Journal of the American Veterinary Medical Association 163(11):1268-1269.

Keywords: immunity, aflatoxin, complement, humoral immunity, immunosuppression, vaccine, immunization, turkey

Notes: The effects of aflatoxin on immunity and resistance to infection seemed to vary with the animal species and microbial agent.

1008. Pier, A.C., K.L. Heddleston, S.J. Cysewski and J.M. Patterson. 1972. Effect of aflatoxin on immunity in turkeys. II. Reversal of impaired resistance to bacterial infection by passive transfer of plasma. Avian Diseases 16(2):381-387.

Keywords: thymus, humoral immunity, cellular immunity, pathology, turkey, immunity, aflatoxin, passive immunity

Notes: Aflatoxin impaired the manifestation of acquired resistance to P.M. in vaccinated turkey poults. Passive transfer of plasma from immune birds supplemented acquired resistance.

1009. Pier, A.C. and K.L. Heddleston. 1970. The effect of aflatoxin on immunity in turkeys. I. Impairment of actively acquired resistance to bacterial challenge. Avian Diseases 14:797-809.

Keywords: vaccine, immunization, plasma protein, weight gain, pathology, immunity, turkey, aflatoxin, immunosuppression

Notes: Aflatoxin consumed during or after the period of immunization against P.M. interfered with the development of acquired resistance in 20-60 percent of turkey poults.

1010. Pijoan, C. 1986. Effect of *Pasteurella multocida* and *Haemophilus pleuropneumoniae* toxins on swine alveolar macrophages. Veterinary Immunology and Immunopathology 13(1-2):141-149.

Keywords: cytotoxicity, macrophage, Haemophilus pleuropneumoniae, pathogenesis, toxin, serotype A, serotype D

Notes: Supernatants from broth cultures of P.M. types A and D were incubated with swine alveolar macrophage cells to test their cytotoxic effects.

1011. Pijoan, C., R.B. Morrison and H.D. Hilley. 1983. Serotyping of *Pasteurella multocida* isolated from swine lungs collected at slaughter. Journal of Clinical Microbiology 17(6):1074-1076.

Keywords: serotyping, swine, serotype A, serotype D, lung, acriflavin, hyaluronidase, serotype 3, agglutination

Notes: The most common overall serotype obtained from swine at slaughter was A:3(5) as determined by hyaluronidase sensitivity and acriflavin agglutination tests.

1012. Pijoan, C. and G. Ochoa. 1978. A bactericidal substance against *Pasteurella multocida* produced by pig embryo tracheal explants. Revista Latinoamericana de Microbiologia 20(1):1-3.

Keywords: growth, swine, cell culture, trachea, survival

Notes: Pig embryo tracheal explants were infected with P.M. and the viable bacterial numbers were assessed up to 18 hours post inoculation.

1013. Pillai, P.M., P.K. Abdulla and K.T. Punnoose. 1979. In-vitro drug sensitivity studies on *Pasteurella multocida*, *Streptococcus pneumoniae* and *Corynebacterium pyogenes* associated with pneumonia in goats. Kerala Journal of Veterinary Science 10(1):145-152.

Keywords: Streptococcus pneumoniae, Corynebacterium pyogenes, goat, pneumonia, strain comparison, isolation, culture, biochemical test, serotyping

Notes: The isolation and morphological, cultural, biochemical, biological, and antibiotic sensitivity characteristics of bacteria isolated from goats with pneumonia is reported.

1014. Pirosky, I. 1938. The immunizing, antitoxic and anti-infectious properties of the glycolipid antigen of *Pasteurella aviseptica*. Comptes Rendus de la Societe de Biologie 127:966-969.

Keywords: mice, lipopolysaccharide, P.aviseptica, vaccine, immunization

Notes: The value of lipopolysaccharide preparations for the immunization of mice is reported.

1015. Piskovoi, F.R. 1958. Oxytetracycline, an effective drug for the control of pasteurellosis in birds (Russian). Ptitsevodstvo 12:37-39.

Keywords: antibiotic, treatment, control, chicken

Notes: The use of antibiotic therapy, especially using oxytetracycline, for treatment of avian cholera is discussed.

1016. Platz, S. 1977. Studies on the viability of pathogenic bacteria during short-time-composting of poultry manure (German/E). Zentralblatt fur Veterinarmedizin, Reihe B 24(1):25-34.

Keywords: survival, manure, composting, temperature

Notes: The rising temperatures occurring during composting were sufficient to eliminate P.M. and *P. haemolytica* after exposure to an average 22 hours of composting process.

1017. Pollet, R.A., C.E. Glatz and D.C. Dyer. 1985. The pharmacokinetics of chlortetracycline orally administered to turkeys: influence of citric acid and *Pasteurella multocida* infection. Journal of Pharmacokinetics and Biopharmaceutics 13(3):243-264.

Keywords: metabolism, citric acid, chlortetracycline, antibiotic, turkey, intestinal permeability

Notes: Infection of turkeys by P.M. increased the plasma level of chlortetracycline by increasing the intestinal permeability and lowering the hepatic and renal clearance rate.

1018. Pollet, R.A., C.E. Glatz and D.C. Dyer. 1984. Oral absorption of chlortetracycline in turkeys: influence of citric acid and *Pasteurella multocida* infection. Poultry Science 63(6):1110-1114.

Keywords: antibiotic, turkey, chlortetracycline, metabolism, citric acid, treatment

Notes: Following the oral administration of the antibiotic chlortetracycline alone or with citric acid, plasma and tissue concentrations were determined in healthy turkeys and turkeys infected with P.M. Oral administration of chlortetracycline increased the survival rate of the birds infected with P.M.

1019. Polyakov, A.A., A.U. Khashimov, T.N. Kamalova and K.N. Arbuzov. 1973. Comparison of the efficacy of aerosols and solutions for use in disinfecting poultry houses contaminated with *Pasteurella* (Russian). Sbornik Rabot Uzbekskoi Nauchno-IssledovatelskiiVeterinarnyiInstitut (Tashkent) 21:171-175.

Keywords: disinfection, sanitation, control

Notes: (ONS)

1020. Pomeroy, B.S. 1975. Bacterins have a place in cholera control. Turkey World July, 1975:20-21.

Keywords: prevention, vaccine, immunization

Notes: The use and shortcomings of autogenous bacterins for vaccination against avian cholera are discussed.

1021. Pomeroy, B.S. 1957. Summer health problems. Turkey World July, 1957:16-17,42-43.

Keywords: prevention, control, general, turkey

Notes: A general overview of avian cholera, fowl typhoid, internal hemorrhage and external parasites in turkeys is given.

1022. Pomeroy, B.S. 1951. Biological products in the prevention and control of poultry diseases. Proceedings, American Veterinary Medical Association, 88th Annual Meeting, Aug. 20-23 1951:215-222.

Keywords: vaccine, treatment

Notes: The control measures and biological products used in poultry practice including prophylactic as well as therapeutic values are discussed.

1023. Popova, Z.V., E.L. Gorev, I.P. Goreva and A.E. Bakaev. 1964. Use of terramycin in pasteurellosis of poultry. Kolkhkozno-Sovkhoznoe Proizvodstvo Turkmenistana 10:52-57.

Keywords: terramycin, treatment, antibiotic

Notes: (ONS)

1024. Popovici, I. and A. Popoviciu. 1972. Study by the direct agglutination reaction of *Pasteurella* strains isolated from fowls (Romanian/E). Lucrari Stiintific Institutul Agronomic "N. Balcescu", Bucuresti. Seria C 15:245-253.

Keywords: immunity, serology, agglutination, strain comparison, serotyping

Notes: (ONS)

1025. Popovici, I. and A. Popoviciu. 1966. Control of fowl cholera foci by immuno prevention and chemo prevention. Lucrari Stiintific Institutul Agronomic "N. Balcescu", Bucuresti. Seria C

Keywords: vaccine, chicken, treatment, antibiotic, sulfonamide, goose

Notes: (ONS)

1026. Popovici, I. 1964. Capacity to recover virulence of four attenuated strains of Pasteurella multocida (Romanian/E). Lucrari Stiintific Institutul Agronomic "N. Balcescu", Seria C 7:229-236.

Keywords: virulence, immunization, vaccine, mice

Notes: An increase in virulence after serial passages in mice is described.

1027. Popovici, I. and V. Gogoasa. 1962. Experimental researches on the immunization against avian cholera with attenuated live cultures (Romanian/E). Lucrarile Stiintifice ale Institutului Patologie si Igiena Animala 12:273-281.

Keywords: immunization, goose, chicken, ox bile, vaccine, prevention

Notes: Experimental testing of an attenuation method made possible the large-scale use of live vaccines on poultry farms.

1028. Popovici, V., C. Ungureanu, G. Paunescu and E. Sotiriu. 1971. Enzootic pasteurellosis in mink (Romanian/E). Archiva Veterinaria 8(2):75-83.

Keywords: case report, mink, feed, cannibalism, survival

Notes: An enzootic disease in mink induced by a mammalian strain of P.M. was caused by poor feeding habits and cannibalism.

1029. Popoviciu, A. 1966. Antibiotic-sensitivity of some Pasteurella strains. Moldamine and solvocillin in avian pasteurellosis control (Romanian/E). Lucrari Stiintific Seria C 9:273-281.

Keywords: moldamine, solvocillin, antibiotic sensitivity, treatment, antibiotic

Notes: Sensitivity to various antibiotics was tested using 26 avian Pasteurella strains.

1030. Potter, L.M., J.R. Shelton and G.B. Meyer. 1978. Added fat, Ipropran, and Rofenaid in diets of breeder turkeys. Poultry Science 57(2):485-488.

Keywords: turkey, antibiotic, sulfonamide, sulfadimethoxine, ormetoprim, ipronidazole, egg production, fertility, hatching, feed, secondary effect

Notes: The additions of Ipropran and Rofenaid were observed to be safe as indicated by their lack of effect on any of the breeder parameters measured.

1031. Prescott, J.F., J.L. Bhasin, S.E. Sanford, B.D. Binnington, M.E. Kierstead, D.H. Percy and V.M. Nicholson. 1984. Serotypes and antimicrobial susceptibility of Pasteurella multocida isolated from cattle and pigs in Ontario. Canadian Veterinary Journal 25:117-118.

Keywords: vaccine, immunization, strain comparison, swine, cattle, Canada

Notes: The serotyping of P.M. isolates from cattle and pigs provided data for possible vaccine production.

1032. Price, J.I. 1985. Immunizing Canada geese against avian cholera. Wildlife Society Bulletin 13(4):508-515.

Keywords: vaccine, immunization, Aleutian Canada goose, Branta canadensis leucopareia, lesser snow goose, Chen caerulescens, Canada goose, Branta canadensis, beta-propiolactone, mallard, Anas platyrhynchos, American coot, Fulica americana, giant Canada goose, Branta canadensis maxima, host range, waterfowl, wild bird, serotype 1, goose

Notes: A propiolactone-inactivated type 1 isolate from a lesser snow goose made an effective vaccine for giant Canada geese.

1033. Price, J.I. and C.J. Brand. 1984. Persistence of Pasteurella multocida in Nebraska wetlands under epizootic conditions. Journal of Wildlife Diseases 20(2):90-94.

Keywords: environment, Rainwater Basin, Nebraska, survival, Canada goose, Branta canadensis, wild bird, white fronted goose, Anser albifrons, green-winged teal, Anas carolinensis, mallard, Anas platyrhynchos, carcass, persistance, waterfowl, teal, goose

Notes: Recovery of P.M. from the environment suggested a possible source of infection for susceptible waterfowl using the site.

1034. Prier, J.E. 1950. The in vivo and in vitro effect of aureomycin upon Pasteurella multocida. Veterinary Medicine 45(6):243-245.

Keywords: prevention, control, antibiotic, aureomycin, penicillin, streptomycin, antibiotic sensitivity

Notes: Aureomycin inhibited P.M. in vitro more effectively than penicillin or streptomycin and protected chicks against infection.

1035. Prince, G.H. and J.E. Smith. 1966. Antigenic studies on Pasteurella multocida using immunodiffusion techniques. III. Relationships between strains of Pasteurella multocida. Journal of Comparative Pathology 76:321-332.

Keywords: capsular antigen, somatic antigen, immunoelectrophoresis, strain comparison, agar gel immunodiffusion, antigen, cattle, lipopolysaccharide

Notes: All sixteen of the soluble antigens of P.M. believed to be more deeply seated in the bacterium were shared between bovine and avian strains.

1036. Prince, G.H. and J.E. Smith. 1966. Antigenic studies on Pasteurella multocida using immunodiffusion techniques. II. Relationships with other gram-negative species. Journal of Comparative Pathology 76(3):315-320.

Keywords: Actinobacillus, gram-negative bacteria, immunoelectrophoresis, cross reaction, antigen, strain comparison, related bacteria

Notes: Cross reactions between eight gram-negative bacterial species and a strain of P.M. were studied by immunoelectrophoresis.

1037. Prince, G.H. and J.E. Smith. 1966. Antigenic studies on Pasteurella multocida using immunodiffusion techniques. Identification and nomenclature of the soluble antigens of a bovine haemorrhagic septicaemic strain. Journal of Comparative Pathology 76:303-315.

Keywords: agar gel immunodiffusion, serotyping, capsular antigen, somatic antigen, immunoelectrophoresis, antigen, vaccine, antibody

Notes: Using immunoelectrophoresis, 18 soluble antigens of a strain of P.M. could be identified. Release of soluble antigen by various methods and antibody production to different vaccines were compared. Mickle disintegration readily released the majority of soluble antigens without modification.

1038. Pritchett, I.W. and T.P. Hughes. 1932. The epidemiology of fowl cholera. VI. The spread of epidemic and endemic strains of Pasteurella avicida in laboratory populations of normal fowl. Journal of Experimental Medicine 55:71-78.

Keywords: virulence, chicken, carrier, strain comparison, P.avicida

Notes: Strains of P. avicida isolated from epidemic and endemic outbreaks of avian cholera were compared for their virulence characteristics under laboratory conditions.

1039. Pritchett, I.W., F.R. Beaudette and T.P. Hughes. 1930. The epidemiology of fowl cholera. V. Further field observations of the "spontaneous" disease. Journal of Experimental Medicine 51:259-274.

Keywords: virulence, chicken, P.avicida, carrier, control

Notes: A high carrier rate was accompanied by a high mortality rate in a poultry flock with chronic avian cholera. Removal of carriers reduced mortality.

1040. Pritchett, I.W., F.R. Beaudette and T.P. Hughes. 1930. The epidemiology of fowl cholera. IV. Field observations of the "spontaneous" disease. Journal of Experimental Medicine 51:249-258.

Keywords: P.avicida, carrier, colony morphology, chicken, virulence

Notes: A relationship was seen between colony morphology and persistence of P.M. in chicken flocks.

1041. Prodjoharjono, S., G.R. Carter and G.H. Conner. 1974. Serologic study of bovine strains of Pasteurella multocida. American Journal of Veterinary Research 35(1):111-114.

Keywords: capsular antigen, somatic antigen, serotyping, strain comparison, cattle, respiratory disease, serotype A, serotype D

Notes: Serotyping of 40 strains of P.M. isolated from cattle affected with respiratory disease showed 36 strains to belong to type A and 4 strains to type D.

1042. Prokof'eva, M.T., I.N. Doroshko and I.A. Bukharin. 1959. New methods of vaccination against fowl cholera. Trudy, Ukrainskii Nauchno-Isseldovael'skii, Institut Eksperimental'noi Veterinarii 25:161-173.

Keywords: vaccine, immunization

Notes: (ONS)

1043. Provost, A. and P. Perreau. 1978. Combined vaccines for developing countries (French/E). Developments in Biological Standardization 41:349-360.

Keywords: case report, combined vaccine

Notes: (ONS)

1044. Prunesco, P. and C. Prunesco. 1972. Phagocytosis of bacteria by avian red cells. Naturwissenschaften 59(1):41.

Keywords: immunity, phagocytosis, erythrocyte, cellular immunity

Notes: The phagocytosis of bacteria, including P.M., by avian red cells is described.

1045. Pursglove, S.R., Jr., D.F. Holland, F.H. Settle and D.C. Gnegy. 1976. Control of fowl cholera outbreak among coots in Virginia. Southeastern Association of Game Fish Commissioners, Thirtieth Annual Conference 602-609.

Keywords: treatment, control, American coot, Fulica americana, gadwall, Anas strepera, American widgeon, Anas americana, host range, waterfowl, Virginia, wetting agent, wild bird, duck

Notes: Wetting agents were utilized to collect and destroy over 6,000 coots infected with avian cholera to stop an epizootic.

1046. Pusic, I. 1970. The effect of environment on the incidence of fowl cholera (Yugoslavian/E). Veterinaria (Sarajevo) 1:148-151.

Keywords: chicken, feed, stress, environment, sanitation, immunization

Notes: The importance of "exogenic" factors in the occurrence of enzootic avian cholera is discussed.

1047. Pustovit, G. 1966. Conservation of virulent form of Pasteurella in body of vaccinated poultry (Russian). Ptitsevodstvo 11:28-29.

Keywords: chicken, carrier, vaccine, immunization, reservoir, location

Notes: Virulent P.M. remained present in the organs of vaccinated chickens.

1048. Putsche, R. 1981. Efficacy of serotype B Pasteurella multocida mutants (German/E). Archiva Veterinaria 15(0):19-22.

Keywords: serotype B, chicken, vaccine, immunization

Notes: Type B avian cholera was prevented by vaccination with an attenuated strain. Incompatibility reactions were seen if too high a dose was used.

1049. Pyliotis, N.A. and T.K.S. Mukkur. 1981. Ultrastructural observations on Pasteurella multocida type A (bovine origin). Research in Veterinary Science 31(1):87-89.

Keywords: ultrastructure, capsule, serotype A, fimbriae, pili, mesosome, ribosome, ruthenium red, gram-negative bacteria, cell wall, pathogenesis, virulence

Notes: Ultrastructurally, P.M. was shown to possess a cell wall characteristic of gram-negative bacteria and a capsule.

1050. Quan, T.J., R.K. Tsuchiya and L.G. Carter. 1986. Recovery and identification of Pasteurella multocida from mammals and fleas collected during plague investigations. Journal of Wildlife Diseases 22(1):7-12.

Keywords: case report, skunk, Mephitis mephitis, flea, rat, mice, rabbit, reservoir, cat, dog, man, host range, transmission, rodent

Notes: A possible epizootiologic role of rodents in outbreaks of avian cholera is suggested following recovery of P.M. from rodents, rabbits and carnivores.

1051. Queen, F.B. and E.R. Quortrup. 1946. Treatment of Pasteurella multocida (fowl cholera) infection in wild ducks with autogenous bacterin and penicillin. Journal of the American Veterinary Medical Association 108(827):101-103.

Keywords: treatment, wild bird, pintail, mallard, green-winged teal, penicillin, antibiotic, host range, waterfowl, vaccine, immunization, teal, duck

Notes: An autogenous bacterin and penicillin each protected wild ducks experimentally infected with P.M.

1052. Quortrup, E.R., F.B. Queen and L.J. Merovka. 1946. An outbreak of pasteurellosis in wild ducks. Journal of the American Veterinary Medical Association 108(827):94-103.

Keywords: case report, pathogenesis, wild bird, pathology, mallard, pintail, host range, waterfowl, duck

Notes: The first record of avian cholera in wild ducks is presented. Also, a strain of Pasteurella that differed from P.M. is described.

1053. Rachac, V., P. Vladik, F. Dvorak, L. Bican and J. Moltas. 1986. *Pasteurella multocida* infections in poultry flocks (Czechoslovakian). Veterinarstvi 36(9):419-421.

Keywords: review, chicken

Notes: The occurrence of avian cholera in chicken farms is reviewed.

1054. Radkowski, M. 1986. Infectious diseases as a barrier in the export of animals and meat in international veterinary conventions (Polish). Medycyna Weterynaryjna 42(6):373-376.

Keywords: regulations, trade, meat, Europe

Notes: The impact of disease regulations on trade in animals and meat products among some European nations is presented.

1055. Radnai, I. 1976. The fowl cholera (Hungarian). Kistenyesztok Lapja 20(9):16-18.

Keywords: review, general, chicken

Notes: (ONS)

1056. Radnai, I. 1974. The fowl cholera (Hungarian). Baromfitenyesztes 18(10):18-19.

Keywords: chicken, review, treatment

Notes: A short review of avian cholera is presented.

1057. Radnai, I. 1973. The fowl cholera (Hungarian). Baromfitenyesztes 17(11):18-19.

Keywords: chicken, review, treatment

Notes: Avian cholera is briefly reviewed.

1058. Rafai, P., R. Neumann, W. Leonhardt, L. Frenyo, P. Rudas, L. Fodor and G. Boros. 1987. Effect of environmental temperature on pigs infected with *Pasteurella multocida* type A. Acta Veterinaria Hungarica 35(3):211-223.

Keywords: swine, temperature, serotype A, stress, environment, cortisone, phagocytosis, immunoglobulin G, antibody, immunity, polymorphonuclear neutrophil, neutrophil

Notes: Cold stress of swine caused a significant rise in serum cortisol levels, and prolonged exposure to cold depressed the serum immunoglobulin G level and depressed phagocytosis by polymorphonuclear neutrophils. However, no differences in the course of the clinical infections were detected.

1059. Raffi, F., J. Barrier, D. Baron, H.B. Drugeon, F. Nicolas and A.L. Courtieu. 1987. *Pasteurella multocida* bacteremia: report of thirteen cases over twelve years and review of the literature. Scandinavian Journal of Infectious Diseases 19:385-393.

Keywords: bite, man, human, antibiotic, bacteremia

Notes: Twelve cases of human infection with bacteremia were reviewed. Most were males and all had an underlying disease. Mortality was 31 percent. Ampicillin was an appropriate therapy.

1060. Raffi, F., J. Barrier, D. Baron, J.Y. Grolleau, F. Nicolas and A.L. Cortieu. 1986. Human infections with *Pasteurella multocida* (French). Sem. Hop. Paris 62:1639-1649.

Keywords: man, review, transmission

Notes: (ONS)

1061. Raggi, L.G. and G.S. Stratton. 1954. Pasteurellosis in coots. Cornell Veterinarian 42:229-230.

Keywords: Fulica americana, Ardea alba, California, host range, case report, wild bird, American coot, egret, duck, waterfowl

Notes: P.M. was the cause of disease outbreaks in coots, ducks and egrets in California.

1062. Rahmanina, T.A. 1966. Characteristic strain of causative agent of pasteurellosis of poultry in Tadjikistan (Russian). Trudy Vsesoyuznogo Instituta Eksperimental'noi Veterinarii 32:123-130.

Keywords: strain comparison, chicken

Notes: (ONS)

1063. Ramakrishnan, R., S. Viswanathan and P. Mahalingam. 1978. A report on simultaneous occurrence of pasteurellosis in fowl and turkeys and fowl and geese. Poultry Guide 15(9):71-73.

Keywords: case report, India, chicken, goose, turkey

Notes: Two outbreaks of avian cholera in poultry farms in Tamil Nadu, India, affected two avian species in each case.

1064. Reasoner, D.J. 1979. Microbiology detection of bacterial pathogens and their occurrence. Journal of the Water Pollution Control Federation 51(6):1760-1778.

Keywords: detection, review

Notes: (ONS)

1065. Rebers, P.A. and R.B. Rimler. 1984. The effect of formalin-killing of Pasteurella multocida on the antigenicity and extractability of its lipopolysaccharide. Carbohydrate Research 133(1):83-94.

Keywords: toxicity, antigen, vaccine, immunization, capsular antigen, antigen isolation, agar gel immunodiffusion, lipopolysaccharide, antigen extraction, formalin

Notes: Formalin-killing was shown to affect the extractability of lipopolysaccharides, but no antigenic differences could be detected by immunodiffusion. However, the toxicity of lipopolysaccharides extracted from non-formalin-killed cells was greater than that of lipopolysaccharides from formalin-killed cells.

1066. Rebers, P.A., M. Phillips, R. Rimler, R.A. Boykins and K.R. Rhoades. 1980. Immunizing properties of Westphal lipopolysaccharide from an avian strain of Pasteurella multocida. American Journal of Veterinary Research 41(10):1650-1654.

Keywords: immunization, chicken, mice, rabbit, capsule, lipopolysaccharide, vaccine, antigen isolation

Notes: A lipopolysaccharide antigen was purified from an encapsulated strain of P.M. and was found to induce immunity in chickens.

1067. Rebers, P.A. and K.L. Heddleston. 1976. Fowl cholera: induction of cross-protection in turkeys with bacterins prepared from host-passaged Pasteurella multocida. Avian Diseases 21(1):50-56.

Keywords: vaccine, immunization, cross protection, turkey, chicken, virulence

Notes: Cross-immunizing bacterins were obtained by direct agar medium inoculation with P.M. infected turkey or chicken tissues.

1068. Rebers, P.A., K.L. Heddleston, B. Wright and K. Gillette. 1975. Fowl cholera: cross-protective turkey antisera and IgG antibodies induced with Pasteurella multocida-infected tissue bacterins. Carbohydrate Research 40:99-110.

Keywords: vaccine, immunization, turkey, chicken, cross protection, endotoxin, antibody, medium, passive immunity, antiserum, immunoglobulin G

Notes: Cross-immunity was shown to be passively transferred to chickens or turkeys with the antiserum induced with infected-tissue bacterins, but not with antiserum induced with agar-cultured bacterins.

1069. Rebers, P.A. and K.L. Heddleston. 1974. Immunologic comparison of Westphal-type lipopolysaccharides and free endotoxins from an encapsulated and a nonencapsulated avian strain of Pasteurella multocida. American Journal of Veterinary Research 35(4):555-560.

Keywords: strain comparison, capsule, endotoxin, capsular antigen, lipopolysaccharide, serotyping

Notes: The serologic properties and immunogenicities of antigens from encapsulated and nonencapsulated P.M. cells of avian origin were compared.

1070. Rebers, P.A., K.L. Heddleston and K.R. Rhoades. 1967. Isolation from Pasteurella multocida of a lipopolysaccharide antigen with immunizing and toxic properties. Journal of Bacteriology 93(1):7-14.

Keywords: toxicity, vaccine, antigen, immunization, endotoxin, hemorrhagic septicemia, bison, mice, rabbit, cattle, lipopolysaccharide, antigen isolation, capsule, toxin, virulence

Notes: A high degree of active immunity to P.M. challenge was demonstrated in animals previously injected with milligram amounts of antigen from a capsulated virulent strain.

1071. Reddy, P.R., A.R.M. Reddy, P.K. Reddy, R. Sudhaker and P. Harinath. 1983. A note on the different pathological conditions diagnosed at postmortem examination of poultry at Animal Health Centre, Chittoor, during the year 1981-82. Poultry Adviser 16(2):57-58.

Keywords: detection, case report, India, chicken

Notes: (ONS)

1072. Reece, R.L. and P.J. Coloe. 1985. The resistance to antimicrobial agents of bacteria isolated from pathological conditions of birds in Victoria Australia 1978 to 1983. Australian Veterinary Journal 62(11):379-381.

Keywords: related bacteria, antibiotic, antibiotic resistance, Australia, tetracycline, sulfonamide, chicken, racing pigeon, game bird, host range, pigeon

Notes: The resistance to anti-microbial agents of various bacteria are discussed.

1073. Reed, A. and J.G. Cousineau. 1967. Epidemics involving the common eider (Somateria mollissima) at Ile Blanche, Quebec. Naturaliste Canadien 94(3):327-334.

Keywords: transmission, eider, ecology, case report, Somateria mollissima, host range, humidity, weather, nest density, temperature, rain, waterfowl, wild bird, environment, duck, Canada, Quebec

Notes: Two epidemics of avian cholera in common eiders between the years of 1963 and 1966 were investigated.

1074. Reis, J. 1941. On the presence of Pasteurella avicida in the feces of infected birds (Portugese/E). Arquivos do Instituto Biologico, Sao Paulo 12(22):307-309.

Keywords: P.avicida, feces, sulfonamide, arthritis, chicken, survival

Notes: In one of nine birds experimentally infected by the intramuscular or nasal routes, P. avicida could be isolated from the feces.

1075. Renault, L., J.C. Guillon and M. Palisse. 1962. Contribution to the etiology of respiratory diseases (French). Bulletin del l'Academie Veterinaire de France 35:283-288.

Keywords: respiratory disease, diagnosis

Notes: P.M. was among the pathogens isolated that caused respiratory diseases.

1076. Renes, I. 1972. Studies to reveal the pathomechanism of fowl cholera (preliminary communication. I.) (Hungarian/E). Magyar Allatorvosok Lapja 272:336-340.

Keywords: pathogenesis, virulence, age, condition, mucous membrane, chicken, immunization

Notes: The mechanism of the penetration of the mucous membrane of chickens by virulent P.M., the influence of age and condition on susceptibility and the reasons why active immunization fails are discussed.

1077. Revappa, K.L. 1975. Studies on capsular polysaccharide of Pasteurella multocida. Mysore Journal of Agricultural Sciences 9(4):724-725.

Keywords: capsule, lipopolysaccharide, virulence, rabbit

Notes: An analysis of the capsular polysaccharide of three strains of P.M. by paper chromotography and a study of the pathogenesis due to P.M. polysaccharide using ligated rabbit intestines are described.

1078. Rhoades, K.R. and R.B. Rimler. 1988. Virulence of avian capsular serogroup B Pasteurella multocida for turkey poults. Avian Diseases 32(1):121-123.

Keywords: turkey, capsular antigen, serotype B, virulence, swan

Notes: A type B capsular group strain isolated from a turkey had a high degree of virulence, indicating a disease-producing potential for members of this uncommon serogroup of P.M.

1079. Rhoades, K.R. and R.B. Rimler. 1987. Capsular groups of Pasteurella multocida isolated from avian hosts. Avian Diseases 31:895-898.

Keywords: serotyping, capsular antigen, strain comparison, serotype A, serotype B, serotype D, serotype F, somatic antigen, Bangladesh, Singapore, Canada, host strain

Notes: A comparison of capsular serogroups of 246 isolates from avian host types, geographic locations, and somatic serogroups showed most to be serotype A, with a few serotypes B, D, and F. This is the first report of serotype B from avian hosts in the United States.

1080. Rhoades, K.R. and R.B. Rimler. 1987. Effects of Pasteurella multocida endotoxins on turkeys poults. Avian Diseases 31:523-526.

Keywords: endotoxin, lipopolysaccharide, turkey, toxicity, toxin, virulence

Notes: Lipopolysaccharide preparations from two virulent strains of P.M. and free endotoxin were similar in toxicity for one week-old turkey poults.

1081. Rhoades, K.R. 1964. The microscopic lesions of acute fowl cholera in mature chickens. Avian Diseases 8(3):658-665.

Keywords: pathogenesis, chicken, pathology

Notes: Systematic analysis of microscopic lesions resulting from P.M. infection revealed that acute generalized passive hyperemia was the most significant lesion.

1082. Rhodes, M.B., C.W.Jr. New, P.K. Baker, A. Hogg and N.R. Underdahl. 1987. Bordetella bronchiseptica and toxigenic type D Pasteurella multocida as agents of severe atrophic rhinitis of swine. Veterinary Microbiology 13(2):179-187.

Keywords: atrophic rhinitis, swine, serotype D, related bacteria, Bordetella bronchiseptica, pathology, virulence

Notes: Bordetella bronchiseptica and P.M. were isolated from swine herds with severe atrophic rhinitis. Gnotobiotic pigs injected with Bordetella bronchiseptica alone suffered moderate to severe nasal turbinate atrophy, while pigs injected with P.M. alone suffered slight turbiate atrophy.

1083. Rice, J.T., B.W. Bierer and J.W. Dick. 1979. Vaccination of chickens through the drinking water with a live, Pasteurella multocida vaccine. Poultry Science 58(1):18-22.

Keywords: vaccine, chicken, immunization

Notes: Administration of a 1:50 dilution of the Clemson University P.M. vaccine repeated after a four-week interval provided a significant degree of immunity in chickens against virulent challenge.

1084. Rice, J.T., J.W. Dick and B.W. Bierer. 1978. Subcutaneous vaccination of chickens with a live, avirulent Pasteurella multocida vaccine. Poultry Science 57(6):1514-1518.

Keywords: vaccine, immunization, chicken

Notes: An evaluation of the immunogenic response of broilers to the Clemson University strain at various injection sites indicated that the subcutaneous route produced the greatest degree of protection.

1085. Richard, J.L., R.D. Stubblefield, R.L. Lyon, W.M. Peden, J.R. Thurston and R.B. Rimler. 1986. Distribution and clearance of aflatoxins B-1 and M-1 in turkeys fed diets containing 50 and 150 PPB aflatoxin from naturally contaminated corn. Avian Diseases 30(4):788-793.

Keywords: aflatoxin, immunosuppression, feed efficiency, turkey, antibody, feed, mycotoxin, T-2 toxin, toxin, immunity

Notes: Turkeys fed a diet containing aflatoxin had a reduced antibody response to a second inoculation with sheep erythrocytes, but this reduced antibody response was not observed with vaccination against P.M.

1086. Richard, J.L., S.J. Cysewski, A.C. Pier and G.D. Booth. 1978. Comparison of effects of dietary T-2 toxin on growth, immunogenic organs, antibody formation, and pathologic changes in turkeys and chickens. American Journal of Veterinary Research 39(10):1674-1679.

Keywords: tricothecane mycotoxin, turkey, chicken, pathology, immunity, feed efficiency, immunosuppression, mycotoxin, feed, toxin, T-2 toxin

Notes: There was no effect of T-2 toxin (trichothecine mycotoxin) on agglutinating antibody formation to P.M. bacterin.

1087. Richey, D.J. and C.L. Morgan. 1957. The effect of chloromycetin and sulfaquinoxaline on fowl cholera in turkeys. Poultry Science 36(3):536-538.

Keywords: antibiotic, turkey, treatment, chloromycetin, sulfaquinoxaline, sulfonamide

Notes: Intramuscular injection of chloromycetin prevented the deaths of 12 week old turkeys infected with P.M. when given at the time of or before infection.

1088. Rimler, R.B. 1987. Cross-protection factor(s) of Pasteurella multocida: passive immunization of turkeys against fowl cholera caused by different serotypes. Avian Diseases 31:884-887.

Keywords: turkey, passive immunity, cross protection, strain comparison, immunization, serotype 3, immunoglobulin G, serotype 1, serotype 4, serotype 5, serotype 9, serotype 12

Notes: An antiserum cross-protective against different serotypes of P.M. was made in turkeys by inoculating them with killed serotype 3 organisms grown in vivo and then exposing them to live serotype 3 organisms. The antiserum passively protected turkeys against serotypes 1,3,4,5,9,12 and heterologous capsular type F.

1089. Rimler, R.B. and K.R. Rhoades. 1987. Serogroup F, a new capsule serogroup of Pasteurella multocida. Journal of Clinical Microbiology 25(4):615-618.

Keywords: serotyping, vaccine, serotype A, serotype B, serotype D, serotype E, serotype 1, serotype 3, serotype 7, serotype 12, capsular antigen, somatic antigen, mice, turkey, passive immunity, strain comparison

Notes: The isolation from turkeys of a new capsule serogroup of P.M. with somatic serotypes 1, 3, 7, or 12 is described.

1090. Rimler, R.B., K.R. Rhoades and T.O. Jones. 1987. Serological and immunological study of Pasteurella multocida strains that produced septicaemia in fallow deer. Veterinary Record 121:300-301.

Keywords: fallow deer, Dama dama, strain comparison, capsular antigen, somatic antigen, hemorrhagic septicemia, host range, deer, serotype B, serotype 3, serotype 4

Notes: The fallow deer strains of P.M. more closely resembled the serogroup B/serotype 3,4 Australian ox strain than the hemorrhagic septicemia strain.

1091. Rimler, R.B. and M. Phillips. 1986. Fowl cholera: protection against *Pasteurella multocida* by ribosome-lipopolysaccharide vaccine. Avian Diseases 30(2):409-415.

Keywords: vaccine, adjuvant, passive immunity, ribosome, lipopolysaccharide, polynucleotide, DNA, immunization, chicken

Notes: A ribosome-lipopolysaccharide vaccine gave humoral protection as demonstrated by passive protection tests.

1092. Rimler, R.B. and K.A. Brogden. 1986. *Pasteurella multocida* isolated from rabbits and swine: serological types and toxin production. American Journal of Veterinary Research 47(4):730-737.

Keywords: toxin, serotype D, serotype A, rabbit, swine, capsular antigen, somatic antigen, strain comparison

Notes: When serologically grouped and typed, P.M. isolates from rabbits and swine were found to have capsule and somatic serotypes in common. Toxin producing isolates from both species were found in serogroup D.

1093. Rimler, R.B. and K.R. Rhoades. 1986. Fowl cholera: influence of *Bordetella avium* on vaccinal immunity of turkeys to *Pasteurella multocida*. Avian Diseases 30(4):838-839.

Keywords: Bordetella avium, vaccine, immunization, immunosuppression, turkey

Notes: Turkeys previously exposed to *Bordetella avium* had impaired systemic immunity to live P.M. vaccine.

1094. Rimler, R.B. 1984. Comparisons of serologic responses of white leghorn and New Hampshire red chickens to purified lipopolysaccharides of *Pasteurella multocida*. Avian Diseases 28(4):984-989.

Keywords: serotyping, lipopolysaccharide, chicken, immunization, antiserum, somatic antigen

Notes: The inoculation of chickens with purified lipopolysaccharide from 14 serotypes of P.M. was used to determine their ability to produce serotype-specific antisera for somatic antigen typing.

1095. Rimler, R.B., P.A. Rebers and M. Phillips. 1984. Lipopolysaccharides of the Heddleston serotypes of *Pasteurella multocida*. American Journal of Veterinary Research 45(4):759-763.

Keywords: serotyping, antigen, strain comparison, lipopolysaccharide, hemagglutination

Notes: Lipopolysaccharides were extracted from the 16 serotypes of P.M. and their chemical, physical and hemagglutinating properties are described.

1096. Rimler, R.B. 1983. Replacement of sodium chloride with dextran or polyethylene glycol for immunoprecipitation of lipopolysaccharide with antibodies in chicken or turkey sera. Veterinary Immunology and Immunopathology 4(4):417-424.

Keywords: immunoprecipitation, immunity, polyethylene glycol, dextran, lipopolysaccharide, rocket immunoelectrophoresis, agar gel immunodiffusion, serology, antibody

Notes: Sodium chloride was replaced with dextran or polyethylene glycol in agarose gels for inducing immunoprecipitation of P.M. lipopolysaccharides by turkey or chicken sera.

1097. Rimler, R.B. and W.E. Brown. 1982. Comparisons of the serologic response of chickens to *Pasteurella multocida* and its lipopolysaccharide. Avian Diseases 26(4):842-846.

Keywords: capsular antigen, serology, antibody, lipopolysaccharide, chicken, antigen

Notes: Chickens were inoculated with P.M. cells or purified lipopolysaccharide and compared for their serologic responses to lipopolysaccharide and heat-stable antigens of 16 serotypes.

1098. Rimler, R.B. and K.R. Rhoades. 1981. Lysates of turkey-grown *Pasteurella multocida*: protection against homologous and heterologous serotype challenge exposures. American Journal of Veterinary Research 42(12):2117-2121.

Keywords: vaccine, adjuvant, cross protection, lysozyme, hyaluronidase, EDTA, serotyping, strain comparison, DNAase, Triton X-100, turkey, chicken, mice

Notes: Treatment of P.M. suspensions with DNAase, hyaluronidase, lysozyme, EDTA, and Triton X-100 did not influence their ability to induce protection against homologous and heterologous serotype challenge.

1099. Rimler, R.B. and W.E. Brown. 1980. *Pasteurella multocida*: plasma lysozyme in bacteremic and lipopolysaccharide-exposed turkeys. Journal of Infectious Diseases 142(4):614-617.

Keywords: lysozyme, lipopolysaccharide, turkey, pathogenesis, host range, secondary effect, host physiology

Notes: Turkeys inoculated with 10 mg of lipopolysaccharide produced plasma lysozyme detectable for two hours after inoculation.

1100. Rimler, R.B. and B.R. Boycott. 1979. Cross-protection between avian, porcine, and bovine strains of *Pasteurella multocida* in the mouse. Journal of Comparative Pathology 89(1):89-98.

Keywords: serotyping, vaccine, swine, cattle, mice, cross protection, immunization, strain comparison, capsular antigen, pathology

Notes: Comparisons of the histopathology of pasteurellosis in mice were made after exposure to four strains of P.M., each strain representing a different capsular serotype and different host specificity. Major differences in histopathology did not occur.

1101. Rimler, R.B., P.A. Rebers and K.R. Rhoades. 1979. Fowl cholera: cross-protection induced by *Pasteurella multocida* separated from infected turkey blood. Avian Diseases 23(3):730-741.

Keywords: cross protection, turkey, serotype 1, serotype 3, vaccine, immunization

Notes: Host-grown P.M. was capable of inducing homologous and heterologous immunity.

1102. Rimler, R.B., P.A. Rebers and K.R. Rhoades. 1979. Modulation of cross-protection factor(s) of avian *Pasteurella multocida*. Avian Diseases 23(4):980-996.

Keywords: cross protection, amino acid, inorganic salt, vitamin B, turkey, medium, growth requirement

Notes: P.M. cross-protection factors were conserved through successive passages in vitro. These factors were enhanced or repressed by the use of various media and growth additives such as B vitamins, inorganic salts, and amino acids.

1103. Rimler, R.B. 1978. Coagglutination test for identification of *Pasteurella multocida* associated with hemorrhagic septicemia. Journal of Clinical Microbiology 8(2):214-218.

Keywords: serology, coagglutination, protein A, serotype B, serotype E, hemagglutination, cattle, hemorrhagic septicemia

Notes: Two serotypes (B and E) of P.M. associated with hemorrhagic septicemia in cattle were differentiated by a coagglutination test with antibody-coated staphylococci.

1104. Rimsay, R.L., J.E. Coyle-Dennis, L.H. Lauerman and P.G. Squire. 1981. Purification and biological characterization of endotoxin fractions from *Pasteurella haemolytica*. American Journal of Veterinary Research 42(12):2134-2138.

Keywords: endotoxin, toxin purification, toxin, related bacteria, P.haemolytica, pathology, pathogenesis, cattle, shipping fever, lipopolysaccharide

Notes: A sequential extraction procedure provided three distinct endotoxin fractions from *P. haemolytica*: rough lipopolysaccharide, smooth polysaccharide precipitate and smooth polysaccharide supernatant.

1105. Ringler, D.H., G.K. Peter, C.E. Chrisp and D.F. Keren. 1985. Protection of rabbits against experimental pasteurellosis by vaccination with a potassium thiocyanate extract of *Pasteurella multocida*. Infection and Immunity 49(3):498-504.

Keywords: vaccine, immunization, rabbit, immunoglobulin A, mucosal antibody, antigen, pathogenesis, antigen extraction

Notes: Antigens extracted from a virulent isolate of P.M. with potassium thiocyanate were used to prepare a vaccine for use in rabbits.

1106. Roberts, R.S. 1947. An immunological study of *Pasteurella septica*. Journal of Comparative Pathology 57:261-278.

Keywords: strain comparison, vaccine, immunization, mice, cattle, swine, deer, cross protection, P.septica

Notes: Thirty-seven strains of *P. septica* were classified by cross-protection experiments in mice.

1107. Rocke, T.E., T.M. Yuill and R.D. Hinsdill. 1984. Oil and related toxicant effects on mallard immune defenses. Environmental Research 33(2):343-352.

Keywords: immunity, pathogenesis, oil, crude oil, bunker C fuel oil, immunosuppression, mallard, Anas platyrhynchos, resistance, fuel oil, pollutant, antibody, humoral immunity

Notes: A crude oil, a petroleum distillate and a chemically dispered oil reduced the resistance of mallards to infection with P.M. Ingestion of oils had no effect on antibody-producing capability as measured by the spleen cell plaque-forming assay.

1108. Rodrigues, A.C., A.F. Pestana de Castro, M.B. Serafim and W. Giorgi. 1980. Serological identification and drug sensitivity of Pasteurella multocida strains isolated in Sao Paulo, Brazil (Portuguese/E). Revista de Microbiologica (Sao Paulo) 11(3):83-88.

Keywords: antibiotic sensitivity, serotyping, strain comparison, serotype A, Brazil, rabbit, capsular antigen, somatic antigen

Notes: All strains isolated from rabbits and poultry were Carter's type A, and were sensitive to several antibiotics.

1109. Rodriquez, L. and J. Antonio. 1946. Immunization against avian cholera (Spanish). Gaceta Veterinaria 8(1946):66-87,131-177.

Keywords: vaccine, immunization

1110. Romero, C.H., W. Claflin, F. Frank, T.S. Chang and H.G. Purchase. 1978. Vaccination immunity to selected diseases in chickens fed the androgen analog mibolerone. Poultry Science 57(1):74-79.

Keywords: immunity, Newcastle disease virus, infectious laryngotracheitis virus, avian encephalomyelitis virus, infectious bronchitis virus, fowl pox virus, Marek's disease virus, treatment, antibiotic, immunocompetence, vaccine, immunization, androgen analog, chicken, bursa of Fabricius, mibolerone, immunosuppression

Notes: Mibolerone, which prevents lymphoid leukosis by inducing a slow involution of the bursa of Fabricius, did not interfere with the development of immunity to P.M. and other diseases.

1111. Romvary, A., M.S. Horvay, K. Magyar and J. Gyenes. 1976. Control of an epidemic-like outbreak of fowl cholera by using sulphonamide-trimethoprim combinations (Hungarian/E). Magyar Allatorvosok Lapja 31(12):781-784.

Keywords: treatment, antibiotic, sulfonamide, sulfaquinoxaline, trimethoprim, duck, goose

Notes: The best control of avian cholera was with a combination of sulphomide-trimethoprim in an oral dose of 40 mg/kg of body weight for six to eight days with an initial injection of the combination at 60 mg/kg of body weight.

1112. Romvary, A. and M.S. Horvay. 1976. On the pharmacokinetics of sulphonamide+trimethoprim combination orally administered to geese. Acta Veterinaria Academiae Scientiarum Hungaricae 26(2):173-182.

Keywords: sulfonamide, antibiotic, treatment, goose, sulfachlorpyridazine, sulfaquinoxaline, control, trimethoprim

Notes: Sulfachlorpyridazine sodium or sulfamethoxazole with a trimethoprim level of 0.04 percent was recommended in the food for the control of P.M. infection in geese.

1113. Romvary, A., M.S. Horvay and J. Gyenes. 1976. On the blood level of various sulphonamide-trimethoprim combinations in geese (Hungarian/E). Magyar Allatorvosok Lapja 31(12):776-779.

Keywords: treatment, sulfonamide, trimethoprim, antibiotic, goose

Notes: The combination of trimethoprim at 20 mg/kg and sulfamethoxazole at 100 mg/kg provided a minimum inhibitory concentration against P.M. for two days after parenteral infection in geese.

1114. Rosen, M.N., K.D. D'Amico and E.J. O'Neil. 1973. First record of a golden eagle death due to avian cholera. California Fish and Game 59(3):209-210.

Keywords: case report, Aquila chrysaetos, Haliaeetus leucocephalus, serotype 1, golden eagle, bald eagle, host range, raptor, Tule Lake National Wildlife Refuge, eagle, wild bird

Notes: P.M. was isolated from a dead golden eagle found at the Tule Lake National Wildlife Refuge.

1115. Rosen, M.N. 1972. The 1970-1971 avian cholera epornitic's impact on certain species. Journal of Wildlife Diseases 8(1):75-78.

Keywords: lesser snow goose, Chen hyperborea, white fronted goose, Anser albifrons, western Canada goose, Branta canadensis moffitti, gull, duck, wild bird, case report, Chen rossi, Grus canadensis, Haliaeetus leucocephalus, host range, bald eagle, Ross' goose, sandhill crane, whistling swan, California, environment, stress, drought, shorebird, water, waterfowl, raptor, swan, goose, crane, eagle

Notes: The most serious aspect of the severe avian cholera epornitic of 1970-1971 in California was its impact on species that had low population numbers such as Ross' goose, whistling swans, and sandhill cranes.

1116. Rosen, M.N. 1969. Species susceptibility to avian cholera. Bulletin of the Wildlife Disease Association 5(3):195-200.

Keywords: Anas cyanoptera, Norway rat, shoveler, ruddy duck, stress, environment, Branta canadensis minima, pintail, Anas acuta, cinnamon teal, susceptibility, American coot, gull, wild bird, climate, host range, Fulica americana, whistling swan, Olor columbianus, mallard, Anas platyrhynchos, widgeon, Mareca americana, green-winged teal, Anas carolinensis, white-fronted goose, Anser albifrons, snow goose, Chen hyperborea, cackler goose, waterfowl, swan, rat, goose, duck, teal

Notes: Data obtained on losses occurring to avian cholera among various species of waterfowl were analyzed statistically. Differences in species susceptibility were examined by experimental infection.

1117. Rosen, M.N. and E.E. Morse. 1959. An interspecies chain in a fowl cholera epizootic. California Fish and Game 45(1):51-56.

Keywords: case report, transmission, Mustela sp., Microtus montanus, Asio flammeus, gull, California, host range, reservoir, pheasant, Phasianus colchicus, marsh hawk, Circus cyaneus hudsonius, snow goose, Chen hyperborea, Fulica americana, American coot, meadow mouse, weasel, Olor columbianus, whistling swan, short-eared owl, mice, raptor, owl, swan, goose, duck, waterfowl, wild bird

Notes: A 1958 avian cholera epizootic in waterfowl, in which various mammalian species became involved, is described.

1118. Rosen, M.N. and A.I. Bischoff. 1949. The 1948-49 outbreak of fowl cholera in birds in the San Francisco Bay area and surrounding counties. California Fish and Game 35(3):185-192.

Keywords: case report, California, wild bird, San Francisco Bay, water, transmission, American coot, duck, spoonbill, mallard, widgeon, teal, sprig, canvasback, shorebird, phalarope, blue heron, tern, sandpiper, host range, gull, control, copper sulfate, drainage, saltwater, heron, waterfowl

Notes: An avian cholera outbreak in wild ducks occurred in 1948-49. The symptoms, pathology, transmission and control are reported.

1119. Rosenwald, A.S. and E.M. Dickinson. 1944. A report on Pasteurella pseudotuberculosis infection in turkeys. American Journal of Veterinary Research 5(16):246-249.

Keywords: related bacteria, P.pseudotuberculosis, turkey, case report

Notes: The identification of P. pseudotuberculosis isolated from turkeys was based on biochemical, morphological and physical characteristics.

1120. Rosner, S.F. 1971. Bovine parainfluenza type 3 virus infection and pasteurellosis. American Veterinary Medical Association Journal 159(11):1375-1382.

Keywords: related bacteria, bovine parainfluenza type 3 virus, bovine respiratory disease, P.haemolytica, review, cattle, respiratory disease

Notes: A review of bovine parainfluenza type 3 virus and pasteurellosis infections are presented.

1121. Rossi, L. 1969. Reactions to homologous and heterologous allergens of hens sensitized with atypical mycobacteria and the influence of vaccination against fowl pest and fowl cholera on the development of allergy. Acta Veterinaria Brno 38(3):423-433.

Keywords: chicken, allergy, vaccine, immunosuppression, mycobacteria, tuberculin

Notes: Groups of hens vaccinated against fowl cholera and inoculated with avian tuberculin were tuberculin-negative.

1122. Rubchenkov, P.N. 1985. Effect of relative humidity on the survival of vaccine strain K of Pasteurella multocida in aerosols (Russian). Trudy, Vsesoyuznyi Institut Veterinarnoi Sanitarii i Ektoparasiti 59-61.

Keywords: vaccine, humidity, survival, aerosol

Notes: (ONS)

1123. Rubchenkov, P.N. 1985. Survival of Pasteurella multocida after rehydration of a freeze-dried vaccine, and survival in aerosols (Russian). Veterinariya (Moscow) 1:36.

Keywords: vaccine, aerosol, survival, lyophilization, control, prevention

Notes: The effect of lyophilization, rehydration and aerosolization on the survival of P.M. was studied.

1124. Rubchenkov, P.N. 1976. Survival of vaccine strains of Pasteurella avium and Erysipelothrix rhusiopathiae in the aerosol state (Rumanian/E). Problemy Veterinarnoi Sanitarii 52:190-195.

Keywords: aerosol, survival, related bacteria, vaccine, Erysipelothrix, P.avium

Notes: (ONS)

1125. Ruschoff, B., W. Hermanns and K. Petzoldt. 1987. Distribution of a dermonecrotic crude toxin preparation from Pasteurella multocida serotype D in rats. Journal of Veterinary Medicine, Series B 34(9):691-700.

Keywords: dermonecrotoxin, serotype D, pathogenesis, rat, location, toxin, atrophic rhinitis, pathology, histopathology

Notes: Following systemic application of dermonecrotic crude toxin from a sonic extract of P.M. type D into rats, the toxin was found in the following organs (arranged in decreasing order): liver, kidney, spleen, lymph nodes and thymus, but not in other organs examined using an immunoperoxidase-avidin-biotin-complex technique. Three histopathological findings were seen.

1126. Rush, H.G., J.C. Glorioso, C.A. DaRif and L.C. Olson. 1981. Resistance of Pasteurella multocida to rabbit neutrophil phagocytosis and killing. American Journal of Veterinary Research 42(10):1760-1768.

Keywords: phagocytosis, rabbit, polymorphonuclear neutrophil, complement, susceptibility, bacteriocin, capsule, pathogenesis, neutrophil

Notes: The susceptibilities of several P.M. strains to serum bactericidins and to killing by rabbit polymorphonuclear neutrophils were investigated, using in vitro assays.

1127. Rustamov, I.M. 1982. Breeding of Pasteurella multocida with full-value capsular antigen (Russian). Byllleten Vsesoyuznogo Instituta Eksperimental'noi Veterinarii 45:17-19.

Keywords: chicken, vaccine, capsular antigen, immunization, antigen

Notes: The protection of farm animals and poultry by the use of a capsular antigen vaccine is presented.

1128. Rutter, J.M. and P.D. Luther. 1984. Cell culture assay for toxigenic Pasteurella multocida from atrophic rhinitis of pigs. Veterinary Record 114(16):393-396.

Keywords: toxin, swine, atrophic rhinitis, mice, cell culture

Notes: P.M. isolated from pigs with atrophic rhinitis produced a toxin that caused cytopathic effect in cell cultures derived from embryonic bovine lung.

1129. Rutters, J.M. 1987. The role of Pasteurella multocida in atrophic rhinitis in pigs (French/E). Recueil de Medecine Veterinaire 163(4):439-443.

Keywords: atrophic rhinitis, swine, review, immunization, diagnosis, toxin, vaccine

Notes: The role of P. multocida in atrophic rhinitis is reviewed, including a description of the lesions, clinical signs, role of toxigenic P. multocida strains and other bacterial species and the evaluation of new vaccines.

1130. Ryazantev, M.F. 1962. The effectiveness of live vaccines of the AB and K strains in pasteurellosis of birds. Veterinarya (Moscow) 39(10):51-52.

Keywords: vaccine, immunization, strain comparison

Notes: Several attenuated strains of P.M. were tested for controlling outbreaks of avian cholera.

1131. Ryu, E. 1961. Studies on Pasteurella multocida. VII. Fractionation tests of growth inhibitory substance in normal horse and goat sera against Past. multocida. Japanese Journal of Veterinary Science 23(6):363-366.

Keywords: growth inhibition, medium, isolation, culture, horse, goat, antibody, blood

Notes: The albumin fraction derived from serum of horse or goats exhibited a growth inhibitory action against P.M.

1132. Ryu, E. 1961. Studies on Pasteurella multocida. VI. The relationship between inhibitory action of blood and susceptibility of animals to Past. multocida. Japanese Journal of Veterinary Science 23(6):357-361.

Keywords: susceptibility, medium, growth inhibition, culture, isolation, blood

Notes: The blood of 12 breeds of animals was tested for inhibitory action against 12 strains of P.M., and a close relationship was found between inhibitory action of serum and susceptibility of the donor to disease.

1133. Ryu, E. 1961. Studies on Pasteurella multocida. V. Further study on the immunizing value of egg agar vaccine against fowl cholera. Japanese Journal of Veterinary Science 23(5):303-306.

Keywords: vaccine, egg agar, immunization, adjuvant, growth

Notes: The efficacy of several vaccine sources, including: egg agar, AHG agar, heat-killed egg agar, sodium carbonate egg agar, and egg bouillon cultured vaccine were compared.

1134. Ryu, E. 1959. Studies on *Pasteurella multocida*. II. The value of egg agar used for the cultivation of *Past. multocida*. Japanese Journal of Veterinary Science 21(3):133-137.

Keywords: medium, egg agar, growth, culture, isolation

Notes: Twenty stock cultures of P.M. grew satisfactorily on egg agar, which was recommended as a substitute for blood serum agar.

1135. Ryu, E. 1959. Studies on *Pasteurella multocida*. IV. The immunizing value of egg agar vaccine against fowl cholera. Japanese Journal of Veterinary Science 21(5):281-287.

Keywords: vaccine, immunization, immunity, medium, egg agar, mice, chicken

Notes: Immunization of chickens and mice with egg agar vaccine was compared to immunization with chicken embryo vaccine, commercial vaccine, and a broth culture.

1136. Ryu, E. 1959. Studies on *Pasteurella multocida*. I. Inhibitory action of blood on the growth of *Past. multocida*. Japanese Journal of Veterinary Science 21(2):97-102.

Keywords: medium, supplement, inhibition, culture, growth inhibition, blood, antibody

Notes: Blood and serum from various animals used in culture media were found to inhibit the growth of P.M. due to the presence of bactericidin in the blood.

1137. Ryu, H. and M.L. Kaeberle. 1986. Immunogenicity of potassium thiocyanate extract of type A *Pasteurella multocida*. Veterinary Microbiology 11(4):373-385.

Keywords: immunization, vaccine, antigen, mice, antigen extraction

Notes: Immunization of mice with potassium thiocyanate extract from P.M. induced resistance to challenge with the homologous strain of P.M. and produced limited protection against certain heterologous strains.

1138. Ryu, H., M.L. Kaeberle, J.A. Roth and R.W. Griffith. 1984. Effect of type A *Pasteurella multocida* fractions on bovine polymorphonuclear leukocyte functions. Infection and Immunity 43(1):66-71.

Keywords: polymorphonuclear leukocyte, serotype A, phagocytosis, immunity, cattle, capsular antigen

Notes: Capsular extracts of two bovine type A, encapsulated P.M. isolates inhibited phagocytosis and other functions of polymorphonuclear leukocytes.

1139. Sacks, J.M., K.G. Gillette and G.H. Frank. 1988. Development and evaluation of an enzyme-linked immunosorbent assay for bovine antibody to *Pasteurella haemolytica*: constructing an enzyme-linked immunosorbent assay titer. American Journal of Veterinary Research 49(1):38-41.

Keywords: enzyme-linked immunosorbent assay, ELISA, related bacteria, P.haemolytica, cattle, antibody, serology, antibody titer

Notes: A two-stage strategy was developed and evaluated for estimating serum antibody titer by use of the enzyme-linked immunosorbent assay and a series of dilutions. In Stage 1, the linear response region and least-square estimate of the assay line slope were established from nine point dilution assays. All subsequent assays required only two dilutions.

1140. Safarov, Y.B. and A.A. Mamedov. 1975. Plasma cell reaction in lymphoid organs of chicks inoculated with a combined vaccine against pasteurellosis, salmonellosis and colibacteriosis (Russian). Doklady Vsesoyuznoi Akademii Sel'skokhozyaistvennykh Nauk imeni V.I. 8:31-33.

Keywords: vaccine, bursa of Fabricius, spleen, thymus, chicken, combined vaccine, Escherichia coli, Salmonella, antibody

Notes: In general, a trivalent vaccine produced a more intense plasma-cell reaction than monovalent vaccines. Formation of *Pasteurella* agglutinins was somewhat reduced by trivalent immunization.

1141. Saif, Y.M., K.E. Nestor, R.N. Dearth and P.A. Renner. 1984. Possible genetic variation in resistance of turkeys to erysipelas and fowl cholera. Avian Diseases 28(3):770-773.

Keywords: genetic, susceptibility, host strain, turkey

Notes: Differences between strains of turkeys in mortality during erysipalas and avian cholera outbreaks suggested genetic variation in resistance to these diseases.

1142. Sakurai, K., T. Kurihara, T. Matsuoka, Y. Iijima, F. Watanabe, T. Koeda and T. Sawada. 1986. An outbreak of fowl cholera in green pheasants (Phasianus colchicus) in Japan. Japanese Journal of Veterinary Science 48(4):711-717.

Keywords: case report, green pheasant, Phasianus colchicus, Japan, pathogenesis, host range, pheasant

Notes: Avian cholera in the green pheasant, an indigenous bird in Japan, is reported for the first time.

1143. Salmon, D.E. 1881. Investigation of swine plague, fowl cholera, and southern cattle fever. Report of U.S. Commissioner of Agriculture 1881:258-306.

Keywords: pathogenicity, transmission, chicken, southern cattle fever, swine plague

Notes: The nature and character of swine plague, avian cholera, and southern cattle fever was investigated.

1144. Salmon, D.E. 1880. Investigations of fowl cholera. Report of U.S. Commissioner of Agriculture 1880:401-426.

Keywords: virulence, pathogenicity, chicken, transmission, immunity

Notes: Experiments were done to determine the pathogenicity and transmission of avian cholera infection in chickens.

1145. Samadashvili, M.S., D.M. Gelovani, G.V. Davituliani, G.G. Tabatadze, D.I. Dikhamindzhiya and K.A. Palavandishvili. 1978. Effectiveness of combinations of antibiotics and chemotherapeutic agents against pasteurellosis in fowl (Russian). Sbornik Trudov, Gruzinskii Zootekhnichesko-Veterinarnii Institut 41:185-188.

Keywords: antibiotic, treatment, chicken

Notes: (ONS)

1146. Samberg, Y. 1974. Turkey diseases in Israel--1973. Refuah Veterinarith 31:44-50.

Keywords: turkey, Israel, case report

Notes: Avian cholera was the most common avian disease in turkeys in Israel in 1973.

1147. Sanders, D.A. 1938. Hemorrhagic septicemia: the significance of Pasteurella boviseptica encountered in the blood of some Florida cattle. Florida Agricultural Experiment Station Bulletin 322:5-24.

Keywords: case report, P.boviseptica, hemorrhagic septicemia, cattle, related bacteria, bacteremia, Florida

Notes: The etiological relationship of P. boviseptica to disease outbreaks in Florida cattle was studied.

1148. Sandhu, T. and E.G. Harry. 1981. Serotypes of Pasteurella anatipestifer isolated from commercial white pekin ducks in the United States. Avian Diseases 25(2):497-502.

Keywords: pekin, related bacteria, P.anatipestifer, serotyping, strain comparison, agglutination, agar gel immunodiffusion, duck, serotype 1, serotype 2, serotype 5

Notes: More than 95 percent of field isolates of P. anatipestifer made form 1975 to 1979 belonged to serotypes 1,2, and 5. Plate agglutination was found to be the most suitable test for preliminary classification.

1149. Sandhu, T. 1979. Immunization of white Pekin ducklings against Pasteurella anatipestifer infection. Avian Diseases 23(3):662-669.

Keywords: vaccine, related bacteria, P.anatipestifer, immunization, white pekin, serotype 1, serotype 2, serotype 5

Notes: The most effective bacteria against P. anatipestifer infection was shown to be one that contained all of the predominant serotypes: 1, 2 and 5.

1150. Sandhu, T.S. and H.W. Layton. 1985. Laboratory and field trials with formalin-inactivated Escherichia coli O-78 and Pasteurella anatipestifer bacterin in white pekin ducks. Avian Diseases 29(1):128-135.

Keywords: white pekin, related bacteria, Escherichia coli, P.anatipestifer, vaccine, field test, duck, immunization, combined vaccine

Notes: A combination Escherichia coli and P. anatipestifer bacterin was developed and tested in white pekin ducks in laboratory and field trials.

1151. Sara, I.S., C.B. Vyas and P.K. Dwaraknath. 1978. Influence of pasteurella infection on platelets, platelet adhesiveness, plasma clotting time and fibrinolysins in sheep. Indian Veterinary Journal 55(4):282-284.

Keywords: fibrinolysin, sheep, pathogenesis, platelet, clotting time, secondary effect

Notes: Pasteurella infections in sheep caused the platelet count, adhesiveness and plasma clotting time to increase.

1152. Sarma, D.K., K.K. Baruah and B.R. Boro. 1985. Isolation of Pasteurella anatipestifer and P. haemolytica from an outbreak of duck mortality. Indian Journal of Poultry Science 20(4):326-327.

Keywords: duck, isolation, related bacteria, P.anatipestifer, P.haemolytica

Notes: (ONS)

1153. Sarma, G. and B.R. Boro. 1980. Isolation of Pasteurella multocida from sporadic outbreaks of bovine pasteurellosis in Assam Veterinary Record 106:57-58.

Keywords: case report, cattle, India, hemorrhagic septicemia

Notes: The isolation and characterization of P.M. from bovine pasteurellosis in Assam is described.

1154. Savich, B.M., N.V. Shkarin and T.M. Parshina. 1974. Influence of dibiomycin (benzathine chlortetracycline) on immunizaton of fowls against pasteurellosis. Veterinariya (Moscow) 2:54-55.

Keywords: vaccine, immunization, immunosuppression, treatment, antibiotic, chlortetracycline

Notes: Immunizing in combination with the antibiotic did not interfere with the development of immunity and the antibiotic protected the birds against infection for ten days following infection.

1155. Savich, B.M., E.G. Posokhin, L.S. Malakhova, A.A. Petrushkin, V.P. Markov, V.N. Kulikova, P.F. Dakhkil'gova and P.G. Shrerbinin. 1962. A trial of avirulent vaccine against avian pasteurellosis (Russian). Veterinariya (Moscow) 39(12):32-37.

Keywords: chicken, immunization, vaccine

Notes: The use of an attenuated P.M. strain as a vaccine is reported.

1156. Sawada, T., R.B. Rimler and K.R. Rhoades. 1982. Indirect hemagglutination test that uses glutaraldehyde-fixed sheep erythrocytes sensitized with extract antigens for detection of Pasteurella antibody. Journal of Clinical Microbiology 15(5):752-756.

Keywords: erythrocyte, hemagglutination, serology, detection, antigen, capsular antigen, antigen extraction

Notes: The indirect hemagglutination test reaction was capsular group specific with glutaraldehyde-fixed sheep erythrocytes sensitized with heat extracted antigen.

1157. Schimmel, D. 1987. Results obtained from experimental infection of calves with Pasteurella multocida and Pasteurella haemolytica. Archiv fur Experimentelle Veterinarmedizin 41(3):463.

Keywords: cattle, infection, model, related bacteria, P.haemolytica, atrophic rhinitis

Notes: (ONS)

1158. Schimmel, D. 1987. Results obtained from experimental Pasteurella multocida infection of SPF piglets--Proposal of reproducible infection model. Archiv fur Experimentelle Veterinarmedizin 41(3):455.

Keywords: swine, model, infection, pathogenesis, atrophic rhinitis

Notes: (ONS)

1159. Schimmel, D. 1984. Results obtained from preclinical testing of temperature-sensitive mutant of Pasteurella multocida, serotype B (German/E). Archiv fur Experimentelle Veterinarmedizin 38(2):278-282.

Keywords: serotype B, cattle, immunization, mutant, vaccine

Notes: Calves were successfully protected from fatal challenge infection by four intratracheal applications of a temperature-sensitive mutant of P.M. type B.

1160. Schimmel, D., I. Schimmel and K. Winnefeld. 1982. Shock reaction and pneumonia following administration of Pasteurella multocida endotoxin preparation (German/E). Archiv fur ExperimentelleVeterinarmedizin36(6):881-887.

Keywords: endotoxin, shock, cattle, toxin, pneumonia, pathogenesis, pathology, secondary effect

Notes: Intravenous administration of P.M. endotoxin preparations to calves caused clinical shock reactions and acute catarrhal bronchopneumonia.

1161. Schimmel, D. 1981. Isolation and testing of Pasteurella mutants for the preparation of a live vaccine (German). Archiva Veterinaria 15(0):15-18.

Keywords: vaccine, mutant

Notes: (ONS)

1162. Schimmel, D., U. Fierlinger, A. Jordache, R. Putsche and C. Ungureanu. 1981. Serologic typing in Pasteurella multocida (German/E). Archiva Veterinaria 15:65-68.

Keywords: cattle, swine, capsular antigen, somatic antigen, serotype A, serotype B, serotype D, serotype 1, serotype 2, serotype 3, serotype 8, serotyping

Notes: Capsule (K) and somatic (O) antigens were identified from P.M. strains isolated from swine and calves. The most frequent capsule types are type A, B and D in pigs and A, D and B in calves. The somatic antigens most frequently found in pigs were 1, 2, 3 and 8.

1163. Schimmel, D., K. Winnefeld, I. Schimmel and W.D. Grahlow. 1980. Indirect estimation of biological substances with endotoxin activity by release of serotonin from thrombocytes (German/E). Archiv fur Experimentelle Veterinarmedizin 34(2):313-316.

Keywords: thrombocyte, endotoxin, serotonin, cell culture, toxin, secondary effect, pathogenesis

Notes: Endotoxins were found to cause the release, both in vitro and in vivo, of serotonin from thrombocytes. Release in vitro depended on the concentration and could be quantitatively determined with a sensitivity threshold of 1 mg/ml.

1164. Schimmel, D. and I. Schimmel. 1977. Experimental administration to calves of Pasteurella multocida and Pasteurella multocida endotoxin and its effect on parameters relating to coagulation analysis (German/E). Archiv fur Experimentelle Veterinarmedizin 31(2):265-276.

Keywords: coagulation, endotoxin, shock, thrombocyte, cattle, toxin, pathology, secondary effect, pathogenesis

Notes: Experimental administration to calves of P.M. or of an endotoxin preparation of the same strain produced continuous decline of thrombocytes, disorders in thrombocytic functions and the development of hypofibrino-genemia.

1165. Schimmel, I. and D. Schimmel. 1978. Acetylsalicylic acid and indomethacin and their effects on changes in calves originally caused by Pasteurella multocida endotoxin (German/E). Archiv fur Experimentelle Veterinarmedizin 32(2):247-250.

Keywords: indomethacin, acetylsalicyclic acid, cattle, treatment, endotoxin, toxin

Notes: Treatment of calves with acetylsalicyclic acid and indomethacin prior to intravenous application of endotoxin delayed occurrance of clinical symptoms and gave higher survival rates.

1166. Schipper, G.J. 1947. Unusual pathogenicity of Pasteurella multocida isolated from the throats of common wild rats. Bulletin of Johns Hopkins Hospital 81:333-356.

Keywords: case report, reservoir, Norway rat, pathogenicity, penicillin, strain comparison, transmission, rat, host range, antibiotic sensitivity, hamster, guinea pig, chicken

Notes: A detailed study was made of the pathogenicity, biology, serology, and penicillin sensitivity of strains of P.M. isolated from wild rats. Of 102 Norway rats caught in Baltimore, 14 carried isolates of P.M. in their throats that were virulent for test animals, but not for Norway rats.

1167. Schlink, G.T. and L.D. Olson. 1987. Vaccination of turkey breeder hens and toms for fowl cholera with CU strain. Avian Diseases 31(1):29-38.

Keywords: vaccine, immunization, turkey, egg production

Notes: The combination of vaccinations most effective in protecting laying breeders was vaccination in the drinking water at 7 and 11 weeks and inoculation into the air spaces of the head at 15 weeks.

1168. Schlink, G.T. and L.D. Olson. 1987. Fowl cholera vaccination of growing turkeys with CU strain via routes other than oral. Avian Diseases 31(1):22-28.

Keywords: vaccine, immunization, antibody, turkey

Notes: Turkeys developed a high level of protective immunity and serum antibody when vaccinated with the CU strain of P.M. via routes other than oral.

1169. Schlink, G.T. and L.D. Olson. 1987. Effects of bursectomy, irradiation, and cyclophosphamide on turkeys vaccinated with CU cholera strain. Avian Diseases 31(1):13-21.

Keywords: bursa of Fabricius, bursectomy, vaccine, immunization, immunosuppression, irradiation, cyclophosphamide, turkey

Notes: Bursectomized turkeys vaccinated at 7 weeks and challenged at 11 weeks had a significantly lower survival rate than the controls. The immunosuppressive effect of cyclophosphamide was dosage-dependent.

1170. Schlink, G.T. and L.D. Olson. 1979. A microtiter agglutination test for anti-*Pasteurella multocida* antibodies in turkeys. Avian Diseases 24(4):1066-1071.

Keywords: antibody, detection, serology, turkey, agglutination

Notes: A microtiter agglutination test was developed for assaying antibodies to P.M. in turkeys vaccinated with live, avirulent Clemson University strain. Compared with the tube agglutination test, this test required less antigen and serum, and was less laborious.

1171. Schmerr, M.J.F. and P.A. Rebers. 1979. Studies of immunogenicity of Westphal lipopolysaccharides from *Pasteurella multocida* in mice. Journal of Comparative Pathology 89(4):531-540.

Keywords: cattle, vaccine, mice, immunization, lipopolysaccharide

Notes: When lipopolysaccharide from a bovine strain of P.M. was inoculated into mice, less than 20 percent survived homologous challenge.

1172. Schmidt, E.C.H., L.V. Truitt and M.L. Koch. 1970. Pulmonary abcess with empyema caused by *Pasteurella multocida*: report of a fatal case. American Journal of Clinical Pathology 54(5):733-736.

Keywords: treatment, case report, human, man, transmission

Notes: A man with years of occupational exposure to animals apparently died from a lung infection by P.M.

1173. Seddon, H.R. 1914. Oedema of the wattles of fowls due to an organism of the *Pasteurella* group. Veterinary Journal 21:24-34.

Keywords: case report, chicken, Australia, wattle edema

Notes: Account of an investigation into the cause of a condition affecting the wattles of chickens believed to be a form of avian cholera.

1174. Serdyuk, N.G., P.F. Tsimokh and S.I. Leonchuk. 1974. *Pasteurella* carrier state in fowls and ducks (Russian). Veterinariya (Moscow) 8:58-59.

Keywords: carrier, duck, chicken

Notes: (ONS)

1175. Shakhbanov, A.A. 1971. Submicroscopic structure of *Pasteurella avium* (Russian). Trudy Vsesoyuznogo Institut Veterinarnoi Sanitarii 38:8-9.

Keywords: ultrastructure, P.avium

Notes: (ONS)

1176. Shakhmurzov, M.M. and S.V. Kuznetsov. 1984. *Dictyocaulus viviparus* - a carrier of *Pasteurella multocida* (Russian). Parazitotsenozy i Assotsiativnye Bolezni 120-126.

Keywords: Dictyocaulus viviparus, vector, carrier, transmission, parasite

Notes: The possible role of a parasite as a carrier of P.M. is discussed.

1177. Sharma, J.K. and D.V. Joshi. 1984. In vitro drug sensitivity of *Pasteurella multocida* strains isolated from different species of animals. Indian Journal of Comparative Microbiology, Immunology and Infectious Diseases 5(3):116-119.

Keywords: strain comparison, cattle, sheep, rabbit, guinea pig, mice, antibiotic sensitivity, treatment, swine, furadantin, chloramphenicol

Notes: Sensitivity tests were done on 32 strains of P.M. and all strains were sensitive to furadantin and chloramphenicol.

1178. Sharma, J.K. and D.V. Joshi. 1983. Isolation of *Pasteurella multocida* from different species of animals. Haryana Veterinarian 22(1):41-42.

Keywords: wild bird, serotyping, isolation, cattle, sheep, goat, dog, classification, carrier, chicken, swine, host range

Notes: Isolation and identification of the serotypes of P.M. obtained from healthy and diseased cattle, sheep, goats, pigs, dogs, poultry and free-flying birds.

1179. Sharma, K.N., P.K. Mehrotra and V.K. Khanna. 1979. A note on characterization and antibiotics sensitivity of pasteurellae. Indian Journal of Animal Sciences 49(2):142-145.

Keywords: antibiotic sensitivity, India, cattle, buffalo, treatment, furaxon

Notes: The most suitable chemotherapeutic agent against pasteurellosis in animals was furaxon.

1180. Sharma, R.N., N.P. Bhalla and J.M. Lall. 1974. Observations of experimental infection of *Pasteurella septica* (avian) in domestic fowl. Indian Journal of Animal Health 13(2):105-109.

Keywords: pericarditis, clinical sign, pathology, arthritis, P.septica

Notes: Observations noted on the prominent clinical symptoms of avian cholera including hyperthermia, diarrhea, anaemia, and swollen joints.

1181. Sharma, R.N. and N.P. Bhalla. 1969. Studies on haematological response in fowls to *Pasteurella septica* (avian) I. Response to inoculation of virulent culture. Indian Veterinary Journal 46([illegible]):195-202.

Keywords: hematology, chicken, pathogenesis, P.septica, pathology, secondary effect

Notes: After inoculation of the bacteria, hematological changes observed were: anaemia, oligocythemia, heterophilic leucocytosis and lymphocytopenia.

1182. Shaw, A.A. 1986. Poultry disease in Kashmir-half a decade review. Poultry Adviser 19(1):53-56.

Keywords: case report, India, duck, chicken, Kashmir, water

Notes: Avian cholera was an established reoccuring disease in ducks and chickens in the Kashmir Valley. The source of infection was thought to be the exposure of contaminated organic material when ponds dried in October and November.

1183. Shcherbina, S.K., K.A. Nastenko, K.I. Dmitriev and M.F. Stepenko. 1960. Antibiotics against experimental pasteurellosis of fowl (Russian). Veterinariya (Moscow) 2:40.

Keywords: antibiotic, treatment, chicken

Notes: The use of antibiotics to treat avian cholera is reported.

1184. Shegidevich, E.A., V.B. Fedotov and I.V. Chernushkina. 1985. Identification of serovar D of *Pasteurella multocida* (Russian). Veterinariya (Moscow) 6:63.

Keywords: acriflavin, serotype D, identification

Notes: Acriflavine was used to help identify serovar D.

1185. Shewen, P.E. and B.N. Wilkie. 1983. *Pasteurella haemolytica* cytotoxin: Production by recognized serotypes and neutralization by type-specific rabbit antisera. American Journal of Veterinary Research 44(4):715-719.

Keywords: P.haemolytica, toxin, cell culture, cattle, related bacteria, bovine macrophage, macrophage

Notes: Toxicity of culture supernatants from each of the serotypes of *P. haemolytica* to bovine alveolar macrophages was partially neutralized by type-specific rabbit antisera.

1186. Shigidi, M.T.A. and A.A. Mustafa. 1980. Serological relationship between strains of *Pasteurella multocida*. Cornell Veterinarian 70(1):27-36.

Keywords: cattle, serotyping, somatic antigen, strain comparison, agar gel immunodiffusion, cross reaction, agglutination

Notes: The inter-relationships of 24 strains had strong serogroup-specific agglutinating and precipitating properties, but there were varying degrees of cross-reactivity.

1187. Shigidi, M.T.A. and A.A. Mustafa. 1979. Biochemical and serological studies on *Pasteurella multocida* isolated from cattle in the Sudan. Cornell Veterinarian 69(1):77-84.

Keywords: serotyping, hemorrhagic septicemia, strain comparison, vaccine, cattle, Sudan, Africa, serotype B, serotype E

Notes: P.M. isolated from outbreaks of hemorrhagic septicemia consisted of 42 strains of which 38 belonged to Carter's type B and 4 to type E.

1188. Shikuma, C.C. and G.D. Overturf. 1985. Antibiotic susceptibility of *Pasteurella multocida*. European Journal of Clinical Microbiology 4(5):518-519.

Keywords: antibiotic sensitivity, penicillin, human, man, host range, antibiotic, treatment

Notes: The susceptibility of P.M. to conventional and newer antibiotics was tested. Penicillin G was the most effective.

1189. Shillinger, J.E. and L.C. Morley. 1937. Diseases of upland game birds. U.S. Department of Agriculture Farmers Bulletin 1781:1-33.

Keywords: wild bird, duck, goose, review, pheasant, game bird

Notes: A short description is given of avian cholera and its significance in the United

States. (This was also published in Wildlife Reviews 10:9, 1937 and reprinted in 1942 as the U.S. Fish and Wildlife Service Conservation Bulletin 21, 32 pp.).

1190. Shimizu, M., J. Yamamoto, T. Sakano and T. Shimizu. 1987. Isolation and characterization of temperature-sensitive mutants of Pasteurella multocida capsular serotype D strain. Japanese Journal of Veterinary Science 49(3):535-537.

Keywords: serotype D, capsule, mutant, temperature-sensitive mutant, isolation, swine, mice, vaccine, atrophic rhinitis

Notes: A temperature-sensitive mutant of serotype D was developed from a strain isolated from a pig with atrophic rhinitis. The mutant protected mice against challenge and may have potential as a vaccine against atrophic rhinitis.

1191. Shishkov, N. and R. Kasabov. 1978. Differential diagnosis of respiratory mycoplasmosis and fowl cholera (Bulgarian). Veterinarna Sbirka 76(7):17-20.

Keywords: mycoplasma, diagnosis, respiratory disease, chicken

Notes: The procedures for distinguishing between avian cholera and respiratory mycoplasmosis of chickens are discussed.

1192. Shook, W.B. and H. Bunyea. 1939. The detection of carriers of fowl cholera, and its control, by means of a stained-antigen, rapid whole-blood test. Poultry Science 18(2):146-149.

Keywords: detection, carrier, P.avicida, agglutination, staining technique

Notes: A stained-antigen, rapid whole-blood test was developed for the detection of avian cholera carriers. The test used formalin-fixed P.M. cells stained with crystal violet in an agglutination test.

1193. Shubin, V.A. 1966. Pathomorphological changes of hens with pasteurellosis (Russian). Trudy Vsesoyuznogo Instituta Eksperimental'noi Veterinarii 32:133-143.

Keywords: pathology, chicken

Notes: (ONS)

1194. Shubin, V.A. 1966. Histological differential diagnostics of pasteurellosis and chicken mycoplasmosis (Russian). Veterinariya (Moscow) 8:39-42.

Keywords: histopathology, pathology, chicken, mycoplasma, diagnosis

Notes: The differential histopathology of avian cholera and mycoplasmosis is presented.

1195. Shulyak, F.S. 1979. Bacteriocin production by Bacillus anthracis in vivo. Trudy Vsesoyuznyi Institut Veterinarnykh Preparatov 8:37.

Keywords: bacteriocin, Bacillus anthracis

Notes: (ONS)

1196. Sicoe, O. and M. Ursu. 1986. Development, prevention and control of major infectious poultry diseases under intensive husbandry conditions (Romanian). Revista de Cresterea Animalelor 36(1):28-34.

Keywords: review, general, chicken, treatment, control, vaccine

Notes: (ONS)

1197. Sidorov, M.A. and E.M. Agaeva. 1982. Serological variants of Pasteurella multocida isolated from various animal species (Russian). Byulleten Vsesoyuznogo Instituta Eksperimental'noi Veterinarii 45:3-5.

Keywords: cattle, swine, sheep, rabbit, chicken, serotyping, strain comparison

Notes: (ONS)

1198. Sidorov, M.A. 1978. Prophylactic properties of Pasteurella multocida immune sera (Russian). Trudy Vsesoyuznogo Instituta Eksperimental'noi Veterinarii 47:123-126.

Keywords: passive immunity, antiserum

Notes: The use of specific antisera in the prevention of pasteurellosis is described.

1199. Siegel, D., G. Maestrone, S. Olsen and R.E. Messersmith. 1979. Susceptibility of Pasteurella multocida from fowl cholera outbreaks in turkeys to potentiated sulfadimethoxine and other selected antibacterial drugs. Avian Diseases 23(2):409-416.

Keywords: penicillin, ampicillin, turkey, sulfonamide, novobiocin, gentamycin, nitrofuran, chloramphenicol, antibiotic sensitivity, antibiotic resistance, antibiotic, sulfadimethoxine

Notes: Isolates from outbreaks of avian cholera in turkeys were tested by the Kirby-Bauer agar diffusion technique for their susceptibility to fourteen antibacterial drugs, including potentiated sulfadimethoxine, and examined for changes in resistance to specific agents.

1200. Sikachina, S.F. and P.F. Tsimokh. 1972. The effect of dietary levels of vitamin A on pathological changes of internal organs in hens with pasteurellosis (Ukrainian). Veterinariya (Kiev) 33:43-48.

Keywords: vitamin A, chicken, pathology, diet, nutrition

Notes: The interaction of vitamin A and avian cholera affected kidney and liver histology.

1201. Silver, R.P., B. Leming, C.F. Garon and C.A. Hjerpe. 1979. R-plasmids in Pasteurella multocida. Plasmid 2(3):493-497.

Keywords: strain comparison, plasmid, cattle, antibiotic resistance

Notes: R-plasmids were demonstrated in a strain of P.M. showing multiple drug-resistance, which was isolated from cases of fatal pneumonia in feedlot cattle.

1202. Simbirtsev, V.E. and V.N. Zakharishchev. 1972. Use of the GNKI emulsified vaccine against fowl cholera (Russian). Veterinariya (Moscow) 1:50-51.

Keywords: chicken, vaccine, immunization

Notes: An adjuvanted vaccine was tested in chickens.

1203. Simbirtsev, V.E., V.A. Root, Y.M. Orekhov and O.G. Ivlev. 1971. Microflora of the wattles of hens with chronic pasteurellosis (Russian). Trudy Troitskogo Veterinarnogo Instituta 14(2/3):75-78.

Keywords: wattle, chicken, chronic infection, staphylococcus, streptococcus, diplococci, Escherichia coli

Notes: (ONS)

1204. Simbirtsev, V.E. 1971. An atypical form of pasteurellosis of hens (Russian). Trudy Troitskogo Veterinarnogo Instituta 14(2/3):70-74.

Keywords: treatment, necropsy, peritonitis, pneumonia, chicken

Notes: (ONS)

1205. Simensen, E. and L.D. Olson. 1981. Influence of prior hauling on pathogenesis of Pasteurella multocida in turkeys. Poultry Science 60(10):2221-2225.

Keywords: pathogenesis, transmission, stress, corticosterone, turkey, transport

Notes: Turkeys transported by truck had delayed onset of illness, less severe symptoms, and fewer deaths when compared with birds that had not traveled.

1206. Simensen, E., L.D. Olson and G.L. Hahn. 1980. Influence of Pasteurella multocida and high and low environmental temperatures on adrenals and bursa of Fabricius in turkeys. Avian Diseases 24(4):844-867.

Keywords: bursa of Fabricius, pathogenesis, temperature, stress, hyperplasia, cortical cell, lymphocyte, pathology

Notes: The morphological changes in the adrenals and bursa of Fabricius were investigated in turkeys inoculated with P.M. There was a marked reduction in bursal weight, atrophy of follicles, and a reduction in the number of lymphocytes within the follicles.

1207. Simensen, E., L.D. Olson, M.P. Ryan, W.J. Vanjonack and H.D. Johnson. 1980. Plasma corticosterone concentrations in turkeys inoculated with Pasteurella multocida and maintained at high and low environmental temperatures. Avian Diseases 24(4):833-843.

Keywords: corticosterone, pathogenesis, temperature, stress, turkey, immunity, secondary effect

Notes: The plasma corticosterone concentration was a sensitive indicator of an incubating P.M. infection.

1208. Simensen, E. and L.D. Olson. 1980. Aerosol transmission of Pasteurella multocida in turkeys. Avian Diseases 24(4):1007-1010.

Keywords: transmission, aerosol, turkey, corticosterone, pneumonia

Notes: Uninoculated turkeys died from avian cholera even though they were separated from P.M. inoculated birds by a solid partition one meter high with wire netting to the ceiling.

1209. Simensen, E., L.D. Olson and G.L. Hahn. 1980. Effects of high and low environmental temperatures on clinical course of fowl cholera in turkeys. Avian Diseases 24(4):816-832.

Keywords: pathogenesis, temperature, leukocyte, pneumonia, torticollis, onset, hematocrit, stress, turkey

Notes: The holding temperature had different effects on the course of avian cholera depending on the route of infection.

1210. Simensen, E., L.D. Olson, W.J. Vanjonack, H.D. Johnson and M.P. Ryan. 1978. Determination of corticosterone concentration in plasma of turkeys using radioimmunoassay. Poultry Science 57(6):1701-1704.

Keywords: corticosterone, stress, turkey, temperature, pathogenesis, secondary effect

Notes: There was an increase in the average plasma corticosterone concentration in all groups of inoculated turkeys as determined by radioimmunoassay.

1211. Simmons, D.G., A.R. Gore and E.C. Hodgin. 1980. Altered immune function in turkey poults infected with Alcaligenes faecalis, the etiologic agent of turkey rhinotracheitis (coryza). Avian Diseases 24(3):702-714.

Keywords: immunosuppression, vaccine, immunization, turkey, Alcaligenes faecalis, related bacteria, infectious coryza

Notes: Cellular immune response was impaired after infection with Alcaligenes faecalis but humoral response was unaffected. This immune suppression was probably the cause of failure of avian cholera vaccination of turkeys.

1212. Singer, N. and K. Malkinson. 1979. An avirulent live Pasteurella multocida vaccine for drinking water and aerosol administration against turkey cholera. Avian Pathology 8(4):391-399.

Keywords: vaccine, strain comparison, turkey, aerosol vaccine, immunization

Notes: A naturally avirulent isolate of P.M. was used for the development of a live vaccine against avian cholera in turkeys.

1213. Singer, N., R. Mushin and J. Neumann. 1977. An outbreak of cholera in geese and the efficacy of an autogenous vaccine. Refuah Veterinarith 34(1):29-30.

Keywords: Israel, goose, vaccine, immunization, case report

Notes: An outbreak of avian cholera occurred in domestic geese in Israel. The efficacy of an autogenous vaccine was evaluated.

1214. Singh, R. and E.S. Teh. 1985. Pasteurella multocida infection (fowl cholera) in ducks in Singapore. Singapore Veterinary Journal (8/9):27-33.

Keywords: case report, antibiotic sensitivity, duck, serotype 1, treatment, Singapore, agar gel immunodiffusion

Notes: Serotype 1 P.M. was isolated from ducks in Singapore during the first nine months of 1984. The age ranged from 2 to 16 weeks. Morbidity ranged from 5 to 100 percent and mortality ranged from 0.5 to 80 percent.

1215. Singh, R. and E.S. Teh. 1984. Pasteurella multocida infection (fowl cholera) in ducks in Singapore. Singapore Veterinary Journal 8/9:27-33.

Keywords: duck, Singapore, case report

Notes: (ONS)

1216. Singh, R., M.F. Teng, T.P. Teo and E.K. Kua. 1982. Anatipestifer disease in ducklings in Singapore. Singapore Veterinary Journal 6/7:53-57.

Keywords: duck, Singapore, P.anatipestifer, related bacteria

Notes: (ONS)

1217. Sirbu, Z., G. Paunescu and V. Gogoasa. 1971. Anatomo-histopathologic and haematologic researches in poultry from avian cholera outbreaks (Bulgarian/E). Revista de Zootehnie si Medicina Veterinara 21(5):64-70.

Keywords: histopathology, pathogenesis, chicken, hematology, pathology, carrier

Notes: Histological examination was made of all principal organs of 78 chickens that had avian cholera in various stages of the disease.

1218. Skaletsky, E., L.B. Corbeil, A. Wunderlich, S. Sell and D.S. Strayer. 1982. Proliferative responses of rabbit lymphocytes to Pasteurella multocida decrease with prolonged immunization. Infection and Immunity 38(1):383-385.

Keywords: lymphocyte, cellular immunity, immunization, immune response, lymphocyte transformation, immunosuppression

Notes: Lymphocytes from rabbits immunized with P.M. by various schedules were stimulated to undergo blast transformation in vitro. Repeated immunizations suppressed this response.

1219. Skeeles, J.K., W.S. Swafford, D.P. Wages, H.M. Hellwig, M.F. Slavik, G.E. Houghten and D.L. Crawford. 1985. Studies on the use of a long-acting oxytetracycline in turkeys: serum levels and tissue residues following injection. Avian Diseases 29(1):145-149.

Keywords: neomycin, turkey, oxytetracycline, treatment, vaccine, immunization

Notes: Turkeys were injected subcutaneously with a long-acting oxytetracycline formulation to determine serum levels of the antibiotic.

1220. Skeeles, J.K., W.S. Swafford, D.P. Wages, H.M. Hellwig, M.F. Slavik, J.M. Beasley, G.E. Houghten, P.J. Blore and D. Crawford. 1983. Studies on the use of a long-acting oxytetracycline in turkeys: efficacy against experimental infections with *Alcaligenes faecalis* and *Pasteurella multocida*. Avian Diseases 27(4):1126-1130.

Keywords: treatment, Alcaligenes faecalis, oxytetracycline, turkey, related bacteria, antibiotic

Notes: No evidence of clinical disease was observed in 2-week-old turkey poults inoculated with a pathogenic strain of P.M. and oxytetracycline.

1221. Skidmore, L.V. 1932. The transmission of fowl cholera to turkeys by the common house fly (*Musca domestica* Linn.) with brief notes on the viability of fowl cholera microorganisms. Cornell Veterinarian 22:281-285.

Keywords: transmission, fly, survival, vector, Musca domestica, house fly

Notes: The common house fly that has fed on infected blood was capable of transmitting avian cholera when fed to turkeys.

1222. Smit, T., L.G. Moraal and T. Bakhuizen. 1980. *Pasteurella multocida* infections in birds following cat bites (Dutch/E). Tijdschrift voor Diergeneeskunde 105(8):327-329.

Keywords: cat, transmission, host range, parakeet, Melopsittacus undulatus, dove, Columba palubus, wild bird, bite

Notes: Infection of birds with P.M. following cat bites is well known. Of the birds rescued alive from the mouths of cats, sixty percent died from P.M. infection.

1223. Smith, H.W. 1955. The chemotherapy of experimental fowl cholera in fowls (*Gallus domesticus*). Journal of Comparative Pathology 65:309-316.

Keywords: antibiotic, terramycin, chicken, treatment

Notes: Intramuscular administration of terramycin was superior to other antibiotics in the treatment of avian cholera in chickens.

1224. Smith, H.W. and H.I. Field. 1944. The isolation of *Pasteurella aviseptica* from a turkey. Veterinary Journal 100(2):35-38.

Keywords: case report, turkey, P.aviseptica

Notes: A case of avian cholera in a turkey poult with the isolation of *P. aviseptica* is described.

1225. Smith, I.M. and A.J. Baskerville. 1983. A selective medium for the isolation of *P. multocida* in nasal specimens from pigs. British Veterinary Journal 39:476-486.

Keywords: selective medium, swine, medium, isolation, detection, growth, serotype A, serotype D, culture

Notes: A selective medium was tested for its ability to isolate six serotype A and nine serotype D strains of P.M.

1226. Smith, J.M., D.D. Frame, G. Cooper, A.A. Bickford, G.Y. Ghazikhanian and B.J. Kelly. 1987. *Pasteurella anatipestifer* infection in commercial meat-type turkeys in California. Avian Diseases 31:913-917.

Keywords: related bacteria, turkey, P.anatipestifer, California, case report, culture, isolation

Notes: In 1986, four commercial turkey farms in California suffered a disease characterized by respiratory signs, occasional neurologic signs and increased mortality in young turkeys. All tests were negative until culture attempts were made using a five percent carbon dioxide incubator, which resulted in the isolation of *P. anatipestifer*

1227. Smith, R.H., L.A. Babiuk and P.H.G. Stockdale. 1981. Intranasal immunization of mice against *Pasteurella multocida*. Infection and Immunity 31(1):129-135.

Keywords: vaccine, immunization, hemorrhagic septicemia, mice, antigen extraction

Notes: A comparison of potassium thiocyanate extract with a formalin-killed bacterin suggested that the former extract was superior.

1228. Snipes, K.P., T.E. Carpenter, J.L. Corn, R.W. Kasten, D.C. Hirsh, D.W. Hird and R.H.

McCapes. 1988. Pasteurella multocida in wild mammals and birds in California: Prevalence and virulence for turkeys. Avian Diseases 32(1):9-15.

Keywords: reservoir, turkey, transmission, wild bird, oppossum, Didelphis marsupialis, cottontail rabbit, rabbit, Sylvilagus, Mus musculus, house mouse, mice, cat, Felis catus, Thomomys bottae, Valley pocket gopher, Spermophilus beecheyi, California ground squirrel, ground squirrel, Passer domesticus, house sparrow, sparrow, Euphagus cyanocephalus, Brewer's blackbird, blackbird, Zonotrichia leucophrys, white-crowned sparrow, serotyping, virulence, strain comparison

Notes: More than 1,800 wild mammals and birds were trapped on California turkey farms with and without avian cholera and tested for P.M.. Forty-eight isolates of P.M., of varying serotypes were made from six species of mammal and three species of birds. On only two of seven premises the somatic serotype of the wildlife isolates was the same as the turkey isolates. Seventeen of 31 isolates caused mortality in turkeys.

1229. Snipes, K.P., G.Y. Ghazikhanian and D.C. Hirsh. 1987. Fate of Pasteurella multocida in the blood vascular system of turkeys following intravenous inoculation: comparison of an encapsulated, virulent strain with its avirulent, acapsular variant. Avian Diseases 31(2):254-259.

Keywords: bacteremia, humoral immunity, turkey, capsule, virulence, growth

Notes: Following injection into the bloodstream of turkeys, a virulent, encapsulated strain of P.M. reached 100,000-fold higher concentration than an avirulent, acapsular variant, a difference attributed to humoral defenses.

1230. Snipes, K.P. and D.C. Hirsh. 1986. Association of complement sensitivity with virulence of Pasteurella multocida isolated from turkeys. Avian Diseases 30(3):500-504.

Keywords: complement, capsule, virulence, strain comparison

Notes: An encapsulated, highly virulent strain of P.M. was more resistant to the bactericidal effects of fresh turkey plasma than was an acapsular, low virulence strain.

1231. Soback, S., A. Bor and G. Ziv. 1987. Clinical pharmacology of cefazolin in calves. Journal of Veterinary Medicine, Series A 34(1):25-32.

Keywords: cattle, antibiotic, cefazolin, treatment, antibiotic sensitivity

Notes: (ONS)

1232. Sokkar, I.M., B. Salem, T.Y. Abdel-Motelib, M.M. Taha and S.M. Gerges. 1986. Some studies on duck pasteurellosis in the New Valley. III. Susceptibility of different avian species to the newly isolated strain. Assiut Veterinary Medical Journal 17(34):239-244.

Keywords: goose, turkey, duck, strain comparison, serotyping, serotype D, virulence

Notes: A type D strain isolated from ducks produced 100 percent mortality of geese, turkeys and chickens 24 hours after intramuscular inoculation and 83 percent mortality in geese and turkeys within one week and in chickens within 5 days after intranasal inoculation.

1233. Sokkar, S.M., M.A. Mohamed and H. Fetaih. 1987. Pathogenesis of Pasteurella multocida in experimentally infected rabbits. Archiv fur Experimentelle Veterinarmedizin 41(4):516.

Keywords: rabbit, infection, model, pathogenesis

Notes: (ONS)

1234. Solano, W., J.J. Giambrone and V.S. Panangala. 1983. Comparison of enzyme-linked immunosorbent assay and indirect hemagglutination test for quantitating antibody responses in chickens against Pasteurella multocida. Avian Diseases 27(4):1034-1042.

Keywords: antibody, ELISA, hemagglutination, chicken, serology, vaccine, immunization, enzyme-linked immunosorbent assay

Notes: An indirect enzyme-linked immunosorbent assay was developed to measure humoral antibody responses of chickens to P.M., and was twice as sensitive as the standard indirect hemagglutination test.

1235. Soltys, M.A. and L.F. Pabs-Garnon. Immunological problems in pasteurellosis (fowl cholera). Proceedings of the Annual Meeting U.S. Animal Health Association 1967. Vol 71:277-279.

Keywords: immunology, strain comparison, chicken

Notes: Strains of P.M. isolated from outbreaks of avian cholera varied in their immunogenic activity.

1236. Sotoodehnia, A., I. Aarabi, J. Vand-Yoosefi and A. Tavasoli. 1984. The efficacy of the autogenous fowl cholera killed aluminum hydroxide vaccine in ducks in Iran. Archives de l'Institut Razi 34/35:71-74.

Keywords: immunization, serotype A, duck, Iran, vaccine

Notes: Ducks vaccinated with a killed local strain had high levels of immunity against challenge with virulent strain type A.

1237. Srihari, K. and O. Sreemannarayana. 1977. Fowl cholera. Poultry Adviser 10(1):45-47.

Keywords: review, general, India

Notes: The signs and methods for prevention and control of avian cholera in Indian poultry farms is discussed.

1238. Srinivas, C.S., Y.H. Babu, R.M. James and M.A. Khan. 1983. Incidence of poultry diseases in Kurnool district, A.P. Poultry Adviser 16(4):57-59.

Keywords: case report, India, chicken, Andra Pradesh

Notes: Avian cholera was a major source of poultry mortality in the Kurnool District of Andra Pradesh from 1979 through 1982.

1239. Srivastava, K.W., J.W. Foster, D.L. Dawe, J. Brown and R.B. Davis. 1970. Immunization of mice with components of *Pasteurella multocida*. Applied Microbiology 20(6):951-956.

Keywords: immunization, vaccine, mice, antigen, cell wall, rabbit, antigen extraction

Notes: Preparations of culture filtrate and cell wall and cytoplasmic components from log-phase cells of P.M. were tested for their immunogenicity in mice.

1240. Stafseth, H.J. 1958. Advances in knowledge of poultry diseases over the past fifty years. Poultry Science 37(4):741-775.

Keywords: review

Notes: The advances made against poultry diseases including avian cholera over the past 50 years are reviewed.

1241. Stalheim, O.H.V. and K.L. Heddleston. 1970. Isolation of *Pasteurella multocida* from the urine of steers. Veterinary Record 87:135-136.

Keywords: hamster, shipping fever, cattle, urine, leptospirosis, host range, secondary infection

Notes: P.M. was isolated from the urine of 27 steers during a study on the duration of immunity induced by leptospirosis vaccine.

1242. Staples, K.J. 1969. Problems in raising ducks. South Australian Journal of Agriculture 72(6):202-207.

Keywords: duck, review, Australia

Notes: Effective duck rearing methods are reviewed including the prevention of disease losses.

1243. Steinhagen, P. and G. Schellhass. 1968. Pasteurellosis in a falconry (German/E). Berliner und Muenchener Tieraerztliche Wochenschrift 81(4):72-75.

Keywords: transmission, falconry, buzzard, Buteo buteo, Bramin hawk, Haliastur indicus, case report, kestrel, Falco tinnunculus, eagle, Aquila heliaca, white tailed eagle, Heliaeetus albicilla, host range, raptor, treatment, wild bird

Notes: The outbreak and course of avian cholera in a falconry that was fed with P.M. infected ducks is described.

1244. Stephan, S.A.R., V.R. Kaschula and A.S. Canham. 1949. Fowl cholera in the Malmesbury district of the Western Province. Journal of the South African Veterinary Medical Association 20(3):138-141.

Keywords: case report, South Africa, duck, chicken, control, treatment

Notes: An outbreak of avian cholera is analyzed, with discussion of its possible origin, the extent of mortality and control methods used.

1245. Stepkowski, S. and J. Zarzycki. 1983. Studies on the seroantigenic properties of *Pasteurella multocida* taking into account the heat sensitivity of the microorganism's antigenic components (Polish/E). Annales Universitatis Mariae Curie - Sklodowska, Sectio DD: Medicina Veterinaria 38(0):59-66.

Keywords: antigen, serotype 1, chicken, antigen isolation, immunoelectrophoresis, crossed immunoelectrophoresis, serotyping

1246. Stepkowski, S., J. Zarzycki and G. Wrzolek-Lobocka. 1980. The assay of double immunodiffusion test and immunoelectrophoresis in determining antigenic properties of

Pasteurella multocida (Polish/E). Medycyna Weterynaryjna 36(8):458-461.

Keywords: serotyping, agar gel immunodiffusion, strain comparison, immunoelectrophoresis

Notes: Two-dimensional immunoelectrophoresis was more useful than double diffusion in agar in determining serological groups of P.M.

1247. Stepkowski, S. and G. Wrzolek-Lobocka. 1978. Antibiotic senstivity of Pasteurella multocida, Escherichia coli, and Salmonella gallinarum strains isolated from poultry (Polish/E). Biuletyn Lubelskiego Towarzystwa Naukowego, Biologia 20(1):25-37.

Keywords: Escherichia coli, Salmonella gallinarum, antibiotic, antibiotic sensitivity

Notes: (ONS)

1248. Stepkowski, S. and J. Rzedzicki. 1964. Action of the oil suspension of oxytetracycline in the experimental pastuerellosis of poultry (Polish). Medycyna Weterynaryjna 20(8):461-464.

Keywords: oxytetracycline, antibiotic, chicken, Poland, treatment

Notes: The use of oil-suspended oxytetracycline for therapy of chickens is described.

1249. Stepkowski, S. and M. Szemberowa. 1961. The action of oxytetracycline in pasteurellosis of birds (Polish). Annales Universitatis Mariae Curie - Sklodowska, Sectio DD: Medicina Veterinaria 16(15):227-238.

Keywords: chicken, pheasant, antibiotic, oxytetracycline, treatment

Notes: Intramuscular administration of oxytetracycline prevented deaths of birds that showed advanced symptoms of Pasteurella infection.

1250. Sterk, V., Z. Calic and K. Petrovic. 1956. Fowl cholera as the cause of death of ducklings (Serbo-Croatian). Veterinarski Glasnik 10:822-826.

Keywords: temperature, duck, treatment, stress, parasite, case report, P.avicida

Notes: A severe loss of ducklings due to avian cholera was stopped by treatment with serum. The loss mas made worse by internal parasites and temperature variations.

1251. Stevens, D.L., J.W. Higbee, T.R. Oberhofer and E.D. Everett. 1979. Antibiotic susceptibilities of human isolates of Pasteurella multocida. Antimicrobial Agents and Chemotherapy 16(3):322-324.

Keywords: man, human, antibiotic sensitivity, tetracycline, penicillin, ampicillin, carbenicillin, cephalothin, chloramphenicol, treatment

Notes: Seventeen human strains of P.M., biochemically similar to isolates of animal origins, were tested against 16 antimicrobial agents.

1252. Stiube, P., I.V. Patrascu and G. Faur. 1983. Immunogenicity in turkey and pheasant of a fowl cholera vaccine prepared from the CU strain of Pasteurella multocida (Romanian). Revista de Cresterea Animalelor 33(11):6-10.

Keywords: vaccine, immunity, prevention, turkey, pheasant

Notes: The safety and efficacy of a lyophilized vaccine prepared with the Clemson University strain was tested.

1253. Stoenescu, V., C. Ungureanu, G. Dabija and I. Marinescu. 1964. Prophylactic-curative treatment by drugs of fowl cholera cases (Romanian/E). Lucrarile Institutului de Cercetari Veterinare si Biopreparate "Pasteur" 3(1):185-201.

Keywords: antibiotic, sulfonamide, streptomycin, moldamine, sulfamidine, treatment, tetracycline

Notes: The prophylactic and curative effects of some antibiotic substances against Pasteurella infections is described.

1254. Stout, I.J. and G.W. Cornwell. 1976. Nonhunting mortality of fledged North American waterfowl. Journal of Wildlife Management 40(4):681-693.

Keywords: nonhunting mortality, wild bird, waterfowl, duck, goose

Notes: Mortality to disease was 87.8 percent of the total reported nonhunting mortality.

1255. Strathdee, C.A. and R.Y.C. Lo. 1987. Extensive homology between the leukotoxin of Pasteurella haemolytica A1 and the alpha-hemolysin of Escherichia coli. Infection and Immunity 55(12):3233-3236.

Keywords: leukotoxin, toxin, P.haemolytica, hemolysin, Escherichia coli, immunoblot, related bacteria, antigen

Notes: The P. haemolytica leukotoxin proteins shared extensive homology with the alpha-hemolysin proteins of Escherichia coli. They also cross-reacted in immunoblot analyses, indicating shared epitopes.

1256. Stuart, E.E., R.D. Keenum and H.W. Bruins. 1966. Efficacy of sulfathoxypyridazine against fowl cholera in artificially infected chickens and turkeys, and its safety in laying chickens and broilers. Avian Diseases 10(2):135-145.

Keywords: antibiotic, sulfathoxypyridazine, sulfonamide, chicken, turkey, treatment

Notes: Sulfathoxypyridazine was studied to determine its value against avian cholera.

1257. Stuart, E.E., R.D. Keenum, L.E. Ousterhout and H.W. Bruins. 1966. The enhancement of chlortetracycline activity against Pasteurella multocida with sodium sulphate. Poultry Science 45(1):21-26.

Keywords: feed, chlortetracycline, sodium sulfate, feed additive, antibiotic, treatment, chicken

Notes: Adding calcium and sodium sulphate to feed was effective in enhancing the activity of chlortetracycline.

1258. Sturman, I.I. 1969. Poultry as carriers of pasteurellosis (Russian). Veterinarya (Moscow) 5:44-45.

Keywords: carrier, chicken

Notes: The potential for chronically infected chickens to serve as reservoirs of P.M. was investigated.

1259. Sturman, I.I. and I. Glebova. 1965. The role of chicken mites in pasteurellosis infection (Russian). Veterinariya (Moscow) 12:85-87.

Keywords: mite, chicken, transmission, vector, reservoir

Notes: Mites were studied for their potential role as vectors of P.M.

1260. Stutzenbaker, C.D. 1974. Die Off. Texas Parks and Wildlife 32(3):2-5.

Keywords: waterfowl, wild bird, shorebird, duck, goose, green-winged teal, shoveler, dowitcher, host range, Texas, teal

Notes: Avian cholera killed about 1,000 waterfowl and shorebirds and avian botulism killed about 1,800 birds in Texas.

1261. Suarez, J.G. and L.L. Ilazabal. 1941. Avian cholera epizootic in marine ducks (Spanish). Revista de Medicina Veterinaria (Buenos Aires) 23:145-149.

Keywords: duck, pelican, loon, Chile, case report, host range, wild bird, waterfowl, shorebird

Notes: A very large avian cholera epizootic in marine ducks (with lesser numbers of pelicans and loons) occurred in February 1941 on the beaches of Iquique, Chile.

1262. Sulong, A.K. and S.K. Maheswaran. 1976. Studies on Pasteurella multocida. IV. Immunofluoresence detection of the organisms in spleen and lungs of turkeys vaccinated with live oral vaccines. Veterinary Microbiology 1(1):3-14.

Keywords: detection, vaccine, fluorescent antibody test, turkey, pathogenesis, immunization, spleen, lung

Notes: Oral vaccination of turkeys resulted in local as well as systematic dissemination of the organisms. Immunofluorescence of spleen and lung tissues showed no persistance of P.M. after four weeks.

1263. Svetlov, L.L. and I.M. Tereshin. 1974. Effect of oxytetracycline and chloramphenicol on some properties of Pasteurella multocida DNA. Antibiotiki (Moscow) 19(3):252-255.

Keywords: chloramphenicol, oxytetracycline, antibiotic, DNA, melting point, DNAase

Notes: Oxytetracycline hydrochloride affected P.M. by lowering the DNA melting point and increasing sensitivity to DNA-ase. Chloramphenicol had no effect.

1264. Svoboda, K.H., S. Pohl and W. Mannheim. 1981. Investigations on the phylogeny of Pasteurella multocida: DNA base sequence relatedness among strains representing Carter's serogroups A through E, and elimination of biovar 6 (so-called dog-type strains) (German/E). Zentralblatt fur Bakteriologie, Mikrobiologie und Hygiene Abteilung I Originale A 248(4):494-501.

Keywords: DNA, strain comparison, serotype A, serotype B, serotype C, serotype D, serotype E

Notes: The phylogenetic relationships among strains of P.M. belonging to serotypes A, B, C, D, and E, an indole-negative strain and two "dog-type" strains were investigated using DNA:DNA hybridization. The DNAs of the dog-type strains were almost identical, but showed only 20 percent binding with the type strain (serogroup A biovar 4). The remaining strains showed a high degree of relatedness.

1265. Swiatek, Z. and M. Kondracki. 1973. A preliminary identification of *Pasteurella multocida* and *Diplococcus septicus* in calf diseases by means of immunofluorescent test (Polish). Medycyna Weterynaryjna 29(10):592-593.

Keywords: cattle, fluorescent antibody test, Diplococcus septicus, detection

Notes: A fluorescent antibody test was used as a method for preliminary identification of P.M. in affected calf tissues.

1266. Syuto, B. and M. Matsumoto. 1982. Purification of a protective antigen from a saline extract of *Pasteurella multocida*. Infection and Immunity 37(3):1218-1226.

Keywords: treatment, vaccine, turkey, immunization, chromatography, antigen, rabbit, antigen extraction

Notes: A protective antigen was purified from crude soluble material by chromatography. The 50 percent protective dose of the purified antigen was between 10 and 50 mg of protein in trials where two doses were given at 14-day intervals to 10- to 20-week-old turkeys.

1267. Szecsenyi, I. 1976. History and results in the control of fowl cholera in Hungary (Hungarian). Baromfitenyesztes 20(5):12-13.

Keywords: chicken, control, Hungary

Notes: The history of avian cholera control efforts in Hungary is presented.

1268. Szecsenyi, I. 1974. Contradictions in the control of fowl cholera, possible solutions (Hungarian). Baromfitenyesztes 18(3):8-9.

Keywords: control, treatment, vaccine

Notes: Some of the problems encountered in avian cholera control programs are discussed.

1269. Szecsenyi, I. 1966. Literature review on control of fowl cholera (Hungarian). Mezogazdasagi Vilagirodalom 8(2):142-146.

Keywords: vaccine, control, antibiotic, sanitation

Notes: A short review of avian cholera control methods is given.

1270. Szecsenyi, I. 1965. Additional data to the etiology, epizootiology and the problem of carrier state in fowl cholera (Hungarian/E). Magyar Allatorvosok Lapja 20(2):53-56.

Keywords: crow, pheasant, swine, reservoir, chicken, transmission, host range, wild bird, carrier

Notes: The carrier state was not established in every bird infected and the carrier rate decreased with time. Crows and pheasants could become carriers of P.M.

1271. Szecsenyi, I. 1965. Diagnosis of fowl cholera (Hungarian/E). Magyar Allatorvosok Lapja 20(3):111-113.

Keywords: diagnosis, clinical sign, chicken, wattle disease, wattle, coryza, salpingitis, peritonitis, sacculitis

Notes: A need was expressed to distinguish syndromes previously classified as avian cholera from true avian cholera, due to the lessened virulence of the strains isolated from birds with coryza, sacculitis, wattle disease, peritonitis, and salpingitis.

1272. Szecsenyi, I. 1964. Results of new methods in control of fowl cholera (Hungarian). Baromfitenyesztes 8(18):13.

Keywords: vaccine, control, antibiotic, chicken

Notes: The preliminary results of vaccine and antibiotic trials are reported.

1273. Tabatabai, L.B. and G.H. Frank. 1981. Neuraminidase from *Pasteurella haemolytica*. Current Microbiology 5:203-206.

Keywords: neuraminidase, related bacteria, P.haemolytica, divalent cation, enzyme, hemagglutination, antigen, iron, mercury

Notes: A soluble extracellular antigen produced by P. haemolytica serotype 1 possessed neuraminidase activity that was stimulated by divalent cations and inhibited by mercury and iron ions

1274. Tacu, D., N. Grigoriu, C. Constantinescu, E. Calarasu and G. Prelipceanu. 1973. Typing of *Pasteurella multocida* strains isolated in Roumania. I. Studies concerning the anti-*Pasteurella* type sera from sheep (Romanian/E). Lucrarile Institutului de Cercetari Veterinare si Biopreparate "Pasteur" 9:57-68.

Keywords: serotyping, antiserum, strain comparison, cattle, duck, swine

Notes: Type-specific antisera were obtained by hyperimmunizing two sheep against each of the antigenic types of P.M. These antisera were used for typing P.M. from fowl, cattle, ducks, turkeys, rabbits, and pigs.

1275. Tacu, D. and A. Tacu. 1967. Morphological biochemical, pathogenicity and immunological studies on several Pasteurella multocida ring colony strains (Bulgarian/E). Lucrarile Institutului de Cercetari Veterinare si Biopreparate "Pasteur" 6:439-444.

Keywords: vaccine, immunization, mice, pigeon, colony morphology

Notes: Light grey, slightly transparent ring colonies were isolated from experimentally infected mice or pigeons. The cultures were immunogenic.

1276. Taha, M.M., B. Salem and T.Y. Abdel-Motelib. 1986. Some studies on duck pasteurellosis in the New Valley. II. Macro- and micro-morphological studies on the naturally and experimentally induced disease. Assiut Veterinary Medical Journal 17(34):119-124.

Keywords: duck, pathology, serotyping, pathogenesis

Notes: Experimental infection of ducks with P.M. via intranasal and intramuscular routes was fatal. The signs were more acute after intramuscular infection.

1277. Takaya, M., K. Akiyama, T. Taniguchi, I. Nonomura and T. Horiuchi. 1981. Fowl cholera found in imported myna birds (Eulabes intermedia). National Institute of Animal Health Quarterly 21(3):129-133.

Keywords: virulence, mynah bird, Eulabes intermedia, case report, chicken, serotyping, somatic antigen, host range, Japan

Notes: P.M. was isolated from 54 imported mynah birds that died soon after importation into Japan. The isolate was shown to be highly virulent by injection into chickens with death occurring within 18 hours.

1278. Talkington, F.D., E.B.Jr. Shotts, R.E. Wooley, W.K. Whitehead and C.N. Dobbins. 1981. Introduction and re-isolation of selected gram-negative bacteria from fermented edible wastes. American Journal of Veterinary Research 42(8):1298-1301.

Keywords: fermented edible waste, gram-negative bacteria, lactobacillus, feed, Lactobacillus acidophilus

Notes: The bactericidal nature of Lactobacillus fermentation on gram-negative zoonotic bacteria is described. P.M. survived the fermentation at 5C and 10C but was killed after 48 hours at 20C and 30C.

1279. Taniguchi, T., I. Nonomura, T. Horiuchi, M. Takaya and K. Akiyama. 1980. Pathogenicity of Pasteurella multocida isolated from myna birds against chickens. Tropical Agriculture Research Series 13:37-43.

Keywords: case report, mynah bird, Eulabes intermedia, Japan, host range, chicken

Notes: An outbreak of avian cholera killed 54 of 480 imported myna birds (Eulabes intermedia) in Japan in 1976.

1280. Taranova, L.A. 1970. Specific tissue preparation against fowl cholera. I. Effect on haematological values. II. Field trial (Russian/E). Trudy Moskovskoi Veterinarnoi Akademii 54:129-132.

Keywords: treatment, chicken

Notes: (ONS)

1281. Targowski, S. and H. Targowski. 1979. CO2 requirement for growth of a Pasteurella strain isolated from rabbits. Journal of Clinical Microbiology 10(3):388-389.

Keywords: culture, isolation, carbon dioxide, atypical strain, rabbit, medium, growth

Notes: Growth of an atypical strain isolated from a rabbit abcess occurred only on media supplemented with serum and incubated in a candle jar, but not in an aerobic environment.

1282. Tatrishvili, P.S. and T.B. Abuladze. 1973. Pathological changes in fowls with pasteurellosis, treated with ditetetracycline (Russian). Sbornik Trudov, Gruzinskii Zootekhnichesko-Veterinarnii Institut 38:227-230.

Keywords: ditetracycline, antibiotic, treatment, pathology

Notes: (ONS)

1283. Tavasoli, A., A. Sotoodehnia, I. Aarabi and J. Vand-Yoosefi. 1984. A case report of fowl cholera disease in north of Iran. Archives de l'Institut Razi 34/35:39-41.

Keywords: Iran, duck, goose, chicken, turkey, case report

Notes: Bacterial examinations and typing results are reported on isolates from ducks, geese, and turkeys in Iran.

1284. Taylor, T.T. and D.B. Pence. 1981. Avian cholera in common crows, Corvus brachyrhynchos, from the central Texas panhandle. Journal of Wildlife Diseases 17(4):511-514.

Keywords: skunk, snow goose, Canada goose, pintail, widgeon, blue-winged teal, host range, wild bird, crow, short-eared owl, cottontail rabbit, case report, Texas, Playa Lakes Region, neurology, hemorrhagic meningitis, Corvus brachyrhynchos, green-winged teal, mallard, Franklin's gull, Asio flammeus, Silvilagus sp., Mephitis mephitis, Anser caerulescens, Branta canadensis, Anas platyrhynchos, Anas acuta, Anas americana, Anas discors, Anas crecca, Larus pipixcan, teal, gull, goose, owl, rabbit, waterfowl, reservoir, transmission

Notes: Avian cholera occurred in a flock of common crows. Their role in the dissemination and maintenance of avian cholera in waterfowl is discussed.

1285. Tello, A. 1959. Control of Newcastle disease and fowl cholera (Spanish). Veterinaria y Zootecnia 11(30):23.

Keywords: Newcastle disease, control

Notes: (ONS)

1286. Tereszczuk, S. 1965. Morphological, biochemical and pathogenic properties of inland Pasteurella multocida strains. Bulletin of the Veterinary Institute in Pulawy 9(1/2):11-17.

Keywords: strain comparison, virulence, Poland, chicken, cattle, horse, rabbit, mink, swine

Notes: The strains of P.M. from interior Poland varied biologically, but could be divided into three groups based on morphologic, biochemical and pathogenic properties.

1287. Tereszczuk, S. 1965. The biological properties of Polish strains of Pasteurella multocida and their suitability for the production of biopreparations (Polish/E). Medycyna Weterynaryjna 21(10):589-592.

Keywords: strain comparison, vaccine, Poland, mice, pigeon, virulence

Notes: The characteristics of 116 Polish strains of P.M. are described.

1288. Tereszczukowa, M., M. Truszczynski and I. Ruktowska-Jurga. 1980. Specific immunity in ducks vaccinated with an experimental vaccine against pasteurellosis (Polish/E). Medycyna Weterynaryjna 36(4):199-201.

Keywords: immunization, vaccine, duck

Notes: An experimental vaccine against avian cholera was found to be effective in ducks when given twice at intervals of seven days.

1289. Terzolo, H.R., L.M. Gogorza and A.G. Salamanco. 1980. Pasteurella multocida: first isolation in Argentina, and pathogenicity testing in broiler fowl (Spanish/E). Revista de Medicina Veterinaria (Buenos Aires) 61(5):400-409.

Keywords: virulence, interstitial myositis, Argentina, case report, chicken, pathology

Notes: (ONS)

1290. Thigpen, J.E., M.E. Clements and B.N. Gupta. 1978. Isolation of Pasteurella aerogenes from the uterus of a rabbit following abortion. Laboratory Animal Science 28(4):444-447.

Keywords: case report, rabbit, P.aerogenes, related bacteria

Notes: P. aerogenes was isolated from a rabbit for the first time.

1291. Thigpen, J.E., B.N. Gupta and D.B. Feldman. 1974. Pasteurella multocida infection in the oppossum (Didelphis virginiana). Laboratory Animal Science 24(6):922-923.

Keywords: case report, oppossum, Didephis virginiana, mice, host range, rèservoir

Notes: Pure cultures of P.M. were isolated from the tissues of four moribund or dead oppossums from a breeding colony. The isolates were pathogenic for mice. P.M. may be an opportunistic pathogen in the captive oppossum.

1292. Thuravlev, I.V. 1958. The use of novarsenol in fowl cholera and in hemosepticemia of swine (Russian). Veterinariya (Moscow) 9:72.

Keywords: novarsenol, swine, treatment

Notes: The control of avian cholera with novarsenol is reported.

1293. Tison, D.L. and J.M. Latimer. 1986. Lysis-centrifugation-direct plating technique for isolation of group DF-2 from the blood of a dog bite victim. Journal of Infectious Diseases 153(5):1001-1002.

Keywords: human, man, bite, dog, isolation, medium, culture, case report

Notes: A group DF-2 strain of P.M. was isolated from a human dog bite victim using the lysis-centrifugation-direct plating technique.

1294. Toneva, V. 1979. Interference cases observed and studied in the course of some animal infectious diseases (French). Clinica Veterinaria 102(1):3-9.

Keywords: vaccine, immunization, chicken, swine

Notes: Unexpectedly good results were obtained in Bulgaria by immunizing young pigs against Aujeszky's disease, and by the use of live avian cholera vaccine. In both cases the vaccine evidently directly interfered with the infective agent in the body.

1295. Topolko, S., A. Fras and M. Karlovic. 1973. Valvular endocarditis in hens on our farms (Serbo-Croatian/E). Veterinarski Arhiv 43(7/8):182-187.

Keywords: valvular endocarditis, chicken, group D streptococcus, Escherichia coli, Yugoslavia, related bacteria, Staphylococcus aureus

Notes: Valvular endocarditis was found in 229 of 8309 carcasses submitted for P.M. examination. Bacteriological examination of 67 cases yielded streptococci (mostly of group D) in 38, P.M. in 19, Escherichia coli in 10 and Staphylococcus aureus in 5.

1296. Torky, H.A., M. Eyzzat and M. Akeula. 1985. In vitro assay of non-specific resistance to fowl cholera in chicken. Assiut Veterinary Medical Journal 14(27):81-86.

Keywords: phagocytosis, cellular immunity, humoral immunity, phagocyte, nonspecific resistance

Notes: The levels of systematic antibodies correlated with chemotactic and phagocytic activity of phagocytic cells.

1297. Torky, H.A., M.N. Taha, H.S. Abd-El-Hamid and M. Eyzzat. 1984. Immunosuppressive effect of Asp. fumigatus on vaccination with P. multocida. Journal of the Egyptian Veterinary Medical Association 44(3):129-135.

Keywords: immunosuppression, vaccine, immunization, Aspergillus fumigatus

Notes: (ONS)

1298. Tornoee, N. and A. Ammitzboell. 1978. Pasteurella multocida infection in flocks of poultry (Danish). Dansk Veterinaertidsskrift 61(23):1154-1156.

Keywords: Denmark, chicken, control, vaccine, treatment

Notes: The effects of P.M. on poultry flock productivity in Denmark is presented.

1299. Toshkov, A., M. Mateev and D. Velyanov. 1974. Changes in Pasteurella avicida virulence, and its influence on the course of epizootics of fowl cholera (Bulgarian/E). Izvestiya na Mikrobiologicheskiya Institut, Bulgarska Akademiya na Naukite 25:5-17.

Keywords: virulence, Bulgaria, chicken

Notes: Strains of P.M., isolated from outbreaks of avian cholera in Bulgaria, varied in virulence, which was related to the intensity of the disease outbreak.

1300. Toshkov, A., S. Nedyalkov, G. Kamburov and D. Velyanov. 1965. The influence of etiotropic therapy on the mutual relationships between micro-and macroorganisms. II. Studies of a pattern of chicken cholera treated with sigmamycin (Bulgarian/E). Izvestiya na Mikrobiologicheskiya Institut, Bulgarska Akademiya na Naukite 17:183-192.

Keywords: chicken, antibiotic, treatment, immunosuppression, immunity, sigmamycin, portal of entry

Notes: A heavy bacteremia was established in chickens infected by the oral or nasal route. Early treatment with sigmamycin inhibited the development of effective immunity.

1301. Toth, T.E., R.H. Pyle, T. Caceci, P.B. Siegel and D. Ochs. 1988. Cellular defense of the avian respiratory system: Influx and nonopsonic phagocytosis by respiratory phagocytes activated by Pasteurella multocida. Infection and Immunity 56(5):1171-1179.

Keywords: cellular immunity, phagocytosis, opsonin, chicken, lung, immunity, phagocyte, respiratory disease, vaccine

Notes: Activation by avirulent vaccines of avian respiratory phagocytes to migrate to the respiratory tract may be a means of defending poultry against air sacculitis and pneumonia.

1302. Townsend, E.L., S.K. Maheswaran, J.R. Leininger and T.R. Ames. 1987. Detection of immunoglobulin G to Pasteurella haemolytica capsular polysaccharide by enzyme-linked immunosorbent assay. Journal of Clinical Microbiology 25(2):242-247.

Keywords: immunoglobulin G, related bacteria, P.haemolytica, enzyme-linked immunosorbent assay, capsule, polysaccharide, serotype 1, cattle, poly-L-lysine, ELISA, capsular antigen

Notes: The enzyme-linked immunosorbent assay was a sensitive, reproducible, and rapid technique for the detection of capsular polysaccharide-specific antibodies in calves.

1303. Trigo, E. and C. Pijoan. 1988. Presence of pili in Pasteurella multocida strains associated with atrophic rhinitis. Veterinary Record 122(1):19.

Keywords: swine, atrophic rhinitis, pili, adherence, pathogenesis, strain comparison

Notes: Atrophic rhinitis is associated with toxigenic, piliated strains of P.M. that belong mostly to serotype D, whereas pneumonia is produced by non-toxigenic, non-piliated strains that are mostly serotype A.

1304. Trishkina, E.T. 1976. Drug resistance of microorganisms pathogenic for farm animals (Russian/E). Sel'skokhozyaistvennaya Biologya 11(3):401-408.

Keywords: antibiotic, antibiotic resistance, chicken

Notes: Publications on the development of resistance to antibiotics of bacteria, including P.M., causing disease in farm animals are reviewed.

1305. Trummert, W. and H. Remky. 1959. A study on the serology and therapy of human infections with Pasteurella multocida (French). Presse Medicale 67:1925-1927.

Keywords: man, treatment, antibiotic, serology

Notes: (ONS)

1306. Truszczynski, M., M. Tereszczukowa and I. Rutkowska-Jurga. 1978. Studies on the determination of the best method of poultry infection with Pasteurella multocida with special reference to the evaluation of vaccine effectiveness against fowl cholera. Bulletin of the Veterinary Institute in Pulawy 22(1/2):1-6.

Keywords: immunization, pathogenesis, vaccine, goose

Notes: Geese immunized with an experimental inactivated vaccine against avian cholera were challenged with a virulent strain of P.M. using four routes of infection. Only intramuscular challenge gave a proper evaluation of the vaccine.

1307. Truszczynski, M., M. Tereszczukowa and I. Rutkowska-Jurga. 1975. Preliminary studies on active immunization of poultry against pasteurellosis (Polish/E). Medycyna Weterynaryjna 31(4):199-202.

Keywords: vaccine, goose, chicken, immunization, treatment

Notes: A P.M. vaccine, inactivated with formaldehyde or by heating to 70C, induced resistance to 10-100 MLD. A dose of 0.25 ml of live vaccine induced resistance to 100-1000 MLD, but doses of 0.5 and 1 ml may cause paralysis of the extremities in geese and chickens.

1308. Tsimokh, P.F. 1987. Testing the immunity of fowls to pasteurellosis (Russian). Veterinariya (Kiev) 62:56-58.

Keywords: vaccine, immunity, serology, antibody

Notes: (ONS)

1309. Tsimokh, P.F. 1985. Pasteurellosis in poultry: planning and organizing control measures (Russian). Veterinariya (Moscow) 1:20-21.

Keywords: chicken, control, prevention

Notes: Measures for instituting a control program are discussed.

1310. Tsimokh, P.F. 1981. Aerosol immunization of poultry against pasteurellosis (Ukrainian). Veterinariya (Kiev) 53:30-32.

Keywords: immunization, aerosol vaccine, vaccine, immunity, prevention, duck

Notes: A study was done to assess the effectiveness of aerosol immunization against viral hepatitis and pasteurellosis in ducklings. Aerosol vaccination of formolized vaccines were found effective for both the viral hepatitis and pasteurellosis.

1311. Tsimokh, P.F. and V.V. Suk. 1981. Immunoprophylaxis of fowl cholera (Russian). Veterinariya (Moscow) 5:34-35.

Keywords: vaccine, immunity, prevention

Notes: The use of vaccines to protect poultry against avian cholera is discussed.

1312. Tsimokh, P.F. 1979. Vaccination of ducks against pasteurellosis and viral hepatitis (Russian). Veterinariya (Moscow) 4:37-38.

Keywords: duck hepatitis, vaccine, duck, prevention, adjuvant, immunization, combined vaccine

Notes: Ducklings could be vaccinated at 15 days of age with a locally produced duck hepatitis live vaccine when simultaneously vaccinated with an emulsified P.M. vaccine.

1313. Tsimokh, P.F. 1975. Aerosol immunization of birds (chicks, ducklings) against pasteurellosis (Russian). Veterinariya (Moscow) 10:56-58.

Keywords: immunization, vaccine, aerosol, chicken, duck, adjuvant

Notes: The effectiveness of aerosol immunization of birds against P.M. was studied. Ducklings inoculated subcutaneously with emulsion vaccine developed a 4-month immunity.

1314. Tsimokh, P.F. 1973. Economic efficacy of veterinary measures against avian pasteurellosis (Russian). Veterinariya (Moscow) 6:56-58.

Keywords: vaccine, cost/benefit, chicken, USSR, Ukraine, immunization

Notes: The costs and benefits of prophylactic immunization of 250,000 chickens with a pasteurellosis vaccine in seven localities in the Ukraine are analyzed. Prophylactic vaccination reduced morbidity from 20.7 to 5.3 percent and mortality from 43.7 to 18 percent, giving a 4.2-fold return on per unit costs.

1315. Tsimokh, P.F. and R.S. Shemet. 1971. The effect of vitamin A on resistance of poultry to pasteurellosis (Russian). Veterinarya (Moscow) 7:40-41.

Keywords: resistance, chicken, vitamin A, nutrition

Notes: An experiment demonstrating the effect of vitamin A on the resistance of chickens to avian cholera is described.

1316. Tsimokh, P.P. 1979. Immunobiological changes in poultry vaccinated against pasteurellosis with an aerosol formol vaccine (Russian). Veterinarya (Kiev) 49:44-47.

Keywords: vaccine, aerosol, chicken, serum protein, antibody titer, immunization

Notes: Antibody levels and serum proteins were measured in the testing of an inactivated vaccine delivered by aerosol.

1317. Tsimokh, P.P. and S.I. Leonchuk. 1976. Comparison of Russian emulsion vaccines against pasteurellosis in fowls (Ukrainian). Veterinariya (Kiev) 43:32-35.

Keywords: immunization, chicken, adjuvant, duration of immunity

Notes: Five emulsion vaccines were tested. A single vaccination gave immunity for up to 6 months. Intramuscular injection (into the wing) was more effective than subcutaneous administration. Three of the vaccines were more effective than the other two.

1318. Tsimokh, P.P., R.S. Shemet and S.I. Leonchuk. 1975. Effect of feeding a high-acid diet on immunity to pasteurellosis in hens (Ukrainian). Veterinariya (Kiev) 41:44-46.

Keywords: immunity, acidic diet, chicken, vaccine, immunosuppression, immunization, nutrition

Notes: Feeding hens with a diet containing abnormal amounts of acids and peroxides did not affect their immunity to avian cholera, produced by administration of an emulsified vaccine.

1319. Tsimokh, P.P., R.S. Shemet and S.F. Sikachina. 1972. Effects of emulsion vaccines against fowl pasteurellosis on plasmocytic reactions and other biochemical indices in hens. Veterinariya (Kiev) 31:38-43.

Keywords: adjuvant, vaccine, immunization, blood cell count, serum protein, pathogenesis, chicken, hematology, secondary effect

Notes: The effects of immunization on blood cell counts was examined.

1320. Tsonev, T., L. Karaivanov, V. Shishkov, M. Milanov, D. Chilev, P. Semov and A. Penev. 1979. Study on atypically developing chicken septicemia (Bulgarian/E). Veterinarno-Meditsinski Nauki 16(5):59-66.

Keywords: chicken, atypical septicemia, bacteriophage, identification, septicemia, phage, Bulgaria

Notes: Investigation of unusual chicken septicemia on three Bulgarian chicken farms resulted in the isolation of P.M. which was virulent for white mice by intravenous but not intramuscular injection. The isolated bacteria could be identified as P.M. by lysis with bacteriophage 115.

1321. Tsonev, T., L. Karavainov and V. Feodorov. 1971. Vliyane na furazolidona vurkhy shchamove _Past._ _multocida_ izolirani ot ptitsi

(Bulgarian/E). Bulgarian Academy of Sciences, Sofia 2:249-253.

Keywords: treatment, antibiotic, furazolidone

Notes: (ONS)

1322. Ungureanu, C., D. Schimmel and P. Keilstein. 1985. Comparison of the staphylococcal hyaluronidase test with indirect haemagglutination for serotyping *Pasteurella* strains (German/E). Archiva Veterinaria 17:149-156.

Keywords: serotyping, related bacteria, P.haemolytica, strain comparison, hyaluronidase, hemagglutination

Notes: Application of the tests to 127 strains of P.M. and 52 of *P. haemolytica* from farm animals showed that the staphylococcal hyaluronidase test was suitable only for coarse screening.

1323. Vallee, A., Y. LeTurdu, J.C. Guillon and M. LeMenec. 1972. Natural *Pasteurella anatipestifer* infection in a flock of quail (French). Bulletin de l'Academie Veterinaire de France 45(7):343-347.

Keywords: related bacteria, quail, France, arthritis, P.anatipestifer

Notes: *P. anatipestifer* was isolated from a group of five quail affected with emaciation and arthritis of the feet, from a flock affected by an outbreak of disease with high mortality. Bacteriological and biochemical details of the organism are given.

1324. VanDenHurk, C.F.G.W. 1946. Epizootiology of fowl cholera in the Netherlands in 1945 (Dutch). Tijdschrift voor Diergeneeskunde 71:361-365.

Keywords: case report, Netherlands, chicken

Notes: The distribution, prevalence and extent of avian cholera in the Netherlands in 1945 is discussed.

1325. VanEs, L. and J.F. Olney. 1940. An inquiry into the influence of environment on the incidence of poultry diseases. University of Nebraska Agricultural Experiment Station Research Bulletin 118:17-21.

Keywords: chicken, environment, pathogenesis, stress, secondary infection

Notes: Experiments with avian cholera were done that attempted to determine environmental factors, pathogenesis, and relationships with other bacteria and viruses.

1326. VanEs, L. and H.M. Martin. 1921. The Nebraska hemorrhagic septicemia experiments and the critics. Journal of the American Veterinary Medical Association 11:572-589.

Keywords: vaccine, chicken, hemorrhagic septicemia, cattle, immunization

Notes: A defense of experiments previously reported with commercial vaccines and bacterins against hemorrhagic septicemia and avian cholera is presented.

1327. VanEs, L. and H.M. Martin. 1920. The value of commercial vaccines and bacterins against fowl cholera. University of Nebraska Agricultural Experiment Station Research Bulletin 18:1-11.

Keywords: vaccine, chicken, prevention, immunization

Notes: Experimental tests were done to determine the effectiveness of various preparations offered commercially against avian cholera.

1328. Varachiu, N., H. Singer, D. Curca and G. Salageanu. 1977. Researches on the immunological reactivity of domestic birds during hydric deficiency (Romanian/E). Lucrari Stiintific Institutul Agronomic "N. Balcescu", Bucuresti. Seria C 17:39-42.

Keywords: treatment, vaccine, stress, dehydration, chicken

Notes: Adult hens restricted to one-third of their normal daily water intake had a higher mortality following inoculation of a vaccine strain of P.M. than controls on normal water intake.

1329. Vaughn, L.K., W.L. Veale and K.E. Cooper. 1981. Effects of antipyresis on bacterial numbers in infected rabbits. Brain Research Bulletin 7(2):175-180.

Keywords: fever, rabbit, pathogenesis, virulence, treatment

Notes: (ONS)

1330. Vaught, R.W., H.C. McDougle and H.H. Burgess. 1967. Fowl cholera in waterfowl at Squaw Creek National Wildlife Refuge, Missouri. Journal of Wildlife Management 31(2):248-253.

Keywords: American coot, Fulica americana, canvasback, Aythya valisneria, Anas carolinensis, wood duck, Aix sponsa, pintail, Anas acuta, American widgeon, Mareca americana, green-winged teal, host range, environment, stress, open water, wintering area, weather, overcrowding, lesser snow goose, Chen h.hyperborea, mallard, Anas platyrhynchos, small Canada goose, Branta canadensis hutchinsii, large Canada goose, Branta canadensis interior, Branta canadensis maxima, case report, white fronted goose, Anser albifrons, black duck, Anas rubripes, waterfowl, wild bird, Squaw Creek National Wildlife Refuge, teal, goose

Notes: More than 1,000 lesser snow geese and blue geese died overnight in an avian cholera outbreak in 1964 at a wildlife refuge. Stresses due to limited open water, overcrowding and inclement weather were implicated.

1331. Vega, M.V., S.K. Maheswaran, J.R. Leininger and T.R. Ames. 1987. Adaptation of a colorimetric microtitration assay for quantifying Pasteurella haemolytica A1 leukotoxin and antileukotoxin. American Journal of Veterinary Research 48(11):1559-1564.

Keywords: leukotoxin, related bacteria, P.haemolytica, neutrophil, toxicity, antibody, ELISA, enzyme-linked immunosorbent assay

Notes: The viability of leukotoxin-treated bovine neutrophil target cells was detected by use of a tetrazolium dye that living cells reduced to dark blue formazan. The amount of formazan was quantified by using a microplate spectrophotometer and was proportional to the number of viable target cells. The assay could also be used to measure leukotoxin-neutralizing antibody titers.

1332. Verma, P.C. and P.K. Mohanty. 1983. Infectious diseases affecting ducks and their control. I. Diseases due to bacteria. Poultry Adviser 16(9):41-47.

Keywords: pathology, treatment, review, duck

Notes: Avian cholera is briefly mentioned in a short review of the diseases of ducks in India

1333. Vinokurov, V.V. and A.P. Bereznev. 1974. Economic evaluation of aerosol disinfection efficiency for premises in presence of poultry (Russina/E). Problemy Veterinarnoi Sanitarii 49:245-251.

Keywords: disinfection, treatment, control cost, economic analysis, chicken

Notes: An outbreak of avian cholera was controlled by the administration of antibiotics coupled with aerosol disinfection, and the cost of control methods was reckoned to be one twentieth of potential losses from the disease.

1334. Vitovec, J., P. Vladik and P. Fragner. 1975. Necrotic bacterial complications of pulmonary aspergillosis in peacocks (Czechoslovakian). Veterinarstvi 25(1):25.

Keywords: secondary infection, aspergillosis, peacock, case report, Pavo cristatus, host range

Notes: P.M. was a secondary infection following pulmonary aspergillosis in a peacock.

1335. Vivo, L.M., R. Gonzales, F. Linares and C. Mederos. 1981. Comparative study of two broiler flocks with different methods of administration of Newcastle disease vaccine and suppression of anti-fowl cholera vaccine (Spanish/E). Revista de Avicultura (Havana) 25(4):211-217.

Keywords: chicken, vaccination method, immunity, Cuba, vaccine, immunization, immunosuppression

Notes: Two vaccination schemes in broiler chicken flocks, using live Newcastle disease virus vaccine and an avian cholera bacterin, were compared.

1336. Voitov, L.I. 1966. Microscopic changes in the liver of turkeys affected with pasteurellosis (Russian). Veterinarya (Moscow) 5:33-35.

Keywords: pathology, turkey, liver

Notes: The histopathology of P.M. infection in the liver of affected turkeys is described.

1337. Waddington, F.G. 1944. Pasteurellosis in poultry and wild birds in Tanganyika territory. Veterinary Journal 100:187-191.

Keywords: case report, chicken, Tanganyika, tawny eagle, Aquila rapax rapax, P.aviseptica, host range, transmission, wild bird, eagle

Notes: The diagnosis of avian cholera in poultry and a tawny eagle is described, and the possible inter-relation between infection in wild birds and in domestic poultry is discussed.

1338. Walker, K.H., K. Cooper and C.A.W. Jackson. 1979. Pasteurella multocida as a cause of arthrosynovitis and tenosynovitis in broiler chickens. Australian Veterinary Journal 55(5):250-251.

Keywords: case report, chicken, arthritis, arthrosynovitis, tenosynovitis

Notes: An outbreak in chickens of arthrosynovitis and tenosynovitis was attributed to P.M. infection.

1339. Walser, M.M. and R.B. Davis. 1975. In vitro characterization of field isolants of *Pasteurella multocida* from Georgia turkeys. Avian Diseases 19(3):525-532.

Keywords: antibiotic, serotyping, biochemical test, antibiotic sensitivity, strain comparison, Georgia, turkey

Notes: Field isolates of P.M. from avian cholera outbreaks among turkeys in Georgia were studied by differential biochemical reactions, drug sensitivity and serology.

1340. Wang, J.X., S.C. Wang and Y.H. Yan. 1986. Rapid detection of the specific antigen in the tissues of fowl cholera by a SPA coagglutination test (Chinese). Chinese Journal of Veterinary Science and Technology 5:7-10.

Keywords: detection, protein A, coagglutination

Notes: (ONS)

1341. Wang, M.J., X.Y. Qian and D.Y. Chen. 1983. Studies of mineral oil adjuvant vaccines. II. Preliminary observation on the safetiness and potency of mineral oil adjuvant vaccines (Chinese). Chinese Journal of Veterinary Medicine 9(12):39-42.

Keywords: adjuvant, vaccine, immunization, China

Notes: The use of oil-adjuvanted vaccines in poultry is discussed.

1342. Wang, R.J., Y.S. Zhu, Z.X. Liu and L.J. Zhao. 1982. Experimental control of fowl cholera with sulfaguanidine and sulfadimidine (Chinese). Chinese Journal of Veterinary Medicine 8(12):15.

Keywords: sulfaguanidine, sulfadimidine, antibiotic, treatment, sulfonamide, chicken

Notes: Two sulfa compounds were successfully used to control avian cholera.

1343. Wang, T.F., H. Fang and C.C. Chen. 1984. A preliminary report on the diagnosis of fowl cholera using the indirect fluorescent antibody technique (Chinese). Chinese Journal of Veterinary Medicine 10(12):12-14.

Keywords: fluorescent antibody test, diagnosis

Notes: The fluorescent antibody test was used to diagnose avian cholera.

1344. Ward, A.R. 1904. Fowl cholera. California Agricultural Experiment Station Bulletin 156:3-20.

Keywords: case report, chicken, California, transmission, prevention, control

Notes: An early avian cholera outbreak in California is described, with emphasis on the treatment, control and prevention of the disease.

1345. Watanabe, M. 1982. Turning kitchen waste into feed with the help of lactic acid bacteria (Japanese). Animal Husbandry 36(6):772-776.

Keywords: feed, lactic acid bacteria, temperature, survival

Notes: (ONS)

1346. Watko, L.P. 1966. A chemically defined medium for growth of *Pasteurella multocida*. Canadian Journal of Microbiology 12:933-937.

Keywords: growth, isolation, medium, chemically defined medium

Notes: By increasing dextrose and buffer and adding metallic salts to a previously described chemically defined medium, growth of nine different isolates of P.M. was supported through 10 serial transfers.

1347. Watko, L.P. and K.L. Heddleston. 1966. Survival of shell-frozen, freeze-dried,and agar slant cultures of *Pasteurella multocida*. Cryobiology 3(1):53-55.

Keywords: lyophilization, survival, growth, medium, culture, colony morphology

Notes: Agar slant cultures preserved P.M. cultures better than lyophilization, but produced more changes in the colony morphology of the cultures.

1348. Watson, W.T., J.A. Goldsboro, F.P. Williams and R. Sueur. 1975. Experimental respiratory infection with *Pasteurella multocida* and *Bordetella bronchiseptica* in rabbits. Laboratory Animal Science 25(4):459-464.

Keywords: related bacteria, rabbit, snuffles, bronchopneumonia, respiratory disease, Bordetella bronchiseptica

Notes: A description of clinical and necropsy findings in rabbits experimentally exposed to P.M. and *B. bronchiseptica* intranasally is presented.

1349. Weaver, N. and M.T. Collins. 1981. Evaluation of seven commercial oxidase test products with Pasteurella. American Journal of Veterinary Research 43(2):363-364.

Keywords: detection, related bacteria, biochemical test, P.haemolytica, identification, oxidase

Notes: A test of seven commercial oxidase reagents showed that only the Taxo N Discs and the Bacto-Differentiation Disk oxidase reagents were positive for >90 percent of P.M. isolates and only the Taxo N Discs were positive for >90 percent of P. haemolytica isolates.

1350. Weber, D.J., J.S. Wolfson, M.N. Swartz and D.C. Hooper. 1984. Pasteurella multocida infections: report of 34 cases and review of the literature. Medicine (Baltimore) 63:133-154.

Keywords: man, infection, review, bite

Notes: (ONS)

1351. Webster, L.T. 1930. The epidemiology of fowl cholera. Experimental studies. I. Introduction. Journal of Experimental Medicine 51:219-223.

Keywords: review, chicken, transmission

Notes: The epidemiology of experimentally induced cholera is described.

1352. Webster, L.T., T.P. Hughes, I.W. Pritchett and F.R. Beaudette. 1927. Pasteurella avisepticum infection of poultry. Proceedings of the Society for Experimental Biology and Medicine 25:119-121.

Keywords: transmission, P.avisepticum, rabbit, mice, chicken, portal of entry, pathogenesis

Notes: Experiments were done to prove the theory that avian cholera was caused by P. avisepticum infection of the air passages.

1353. Wei, B.D. and G.R. Carter. 1978. Live streptomycin-dependent Pasteurella multocida vaccine for the prevention of hemorrhagic septicemia. American Journal of Veterinary Research 39(9):1534-1537.

Keywords: vaccine, mutant, streptomycin, rabbit, mice, antibiotic, streptomycin dependance, hemorrhagic septicemia

Notes: A mutagenized type B P.M. was used for the development of a streptomycin-dependent vaccine in mice and rabbits.

1354. Weiner, I. 1966. Prevention and control of fowl cholera on large duck farms (Hungarian/E). Magyar Allatorvosok Lapja 21(2):83-86.

Keywords: treatment, eradication, duck, control, Hungary

Notes: Control of avian cholera by prophylaxis and total replacement of infected flocks eradicated the disease in six of eight flocks.

1355. Weiner, I. 1965. Control of fowl cholera on large duck farms (Czechoslovakian). Veterinarstvi 15(6):246-249.

Keywords: treatment, eradication, duck, control, Hungary

Notes: Prevention and eradication were recommended for control of avian cholera.

1356. Weiner, S. 1980. Control of fowl cholera in Hungary. Poultry Science 59(6):1345-1349.

Keywords: antibiotic, immunization, sulfaquinoxaline, vaccine, treatment

Notes: A vaccination method combined with sulfaquinoxaline treatment was used with success in Hungary.

1357. Weinter, I. 1965. Control of fowl cholera in large stocks of ducks (German/E). Wiener Tierarztliche Monatsschrift 52(6):618-626.

Keywords: prevention, eradication, duck, control, Hungary

Notes: Control of avian cholera by prophylaxis and total replacement of infected flocks eradicated the disease in six of eight flocks.

1358. Welch, W.D., Y.S. Lu and R.E. Bawdon. 1987. Pharmocokinetics of penicillin-G in serum and nasal washings of Pasteurella multocida free and infected rabbits. Laboratory Animal Science 37(1):65-68.

Keywords: treatment, penicillin, rabbit, antibiotic, serum level, nasal washing

Notes: Therapeutic blood levels could be achieved when rabbits were given injections of penicillin-G at 8 hour intervals.

1359. Werda, K. 1955. Effect of iron upon the blood picture of normal and artificially infected hens with fowl cholera (Polish/E). Annales Universitatis Mariae Curie - Sklodowska, Sectio DD: Medicina Veterinaria 10(9):239-267.

Keywords: iron, iron lactate, hemoglobin, erythrocyte, chicken, resistance

Notes: Hens given iron lactate and then infected with P.M. died 24 to 36 hours later than control hens.

1360. Wessman, G.E. and G. Wessman. 1970. Chemically defined media for *Pasteurella multocida* and *Pasteurella ureae*, and a comparison of their thiamine requirements with those of *Pasteurella haemolytica*. Canadian Journal of Microbiology 16(8):751-757.

Keywords: medium, growth, P.ureae, P.haemolytica, thiamine, vitamin, growth requirement, chemically defined medium, isolation

Notes: Experiments compared the nutritional requirements of three *Pasteurella* species, P.M., *P. ureae* and *P. haemolytica*. Outlines of media of known chemical composition for the growth of each are presented.

1361. White, G. 1972. Turkey cholera. Turkeys 20(10):18-19.

Keywords: turkey, review

Notes: A popular description of pasteurellosis in turkeys is given.

1362. Wichmann, R.W. and J.H. Stoner. 1974. The protective effect conferred by *Pasteurella multocida* bacterin administered intranasally. Avian Diseases 18(4):631-633.

Keywords: vaccine, immunization, chicken

Notes: A vaccine delivered subcutaneously and intranasally protected chickens against homologous challenge. Intranasal vaccination with killed P.M. may provide greater protection than subcutaneous administration alone.

1363. Wickramasinghe, R. and H.J. Peiris. 1985. An outbreak of fowl cholera in a poultry farm in Sri Lanka. Sri Lanka Veterinary Journal 33(1/2):29-33.

Keywords: Sri Lanka, case report, chicken, clinical sign, treatment

Notes: (ONS)

1364. Wickware, A.B. 1945. Case reports of relatively infrequent diseases observed at the poultry pathology laboratory. Canadian Journal of Comparative Medicine 9(6):151-154.

Keywords: case report, flicker, Canada, host range, Colaptes auratus, wild bird

Notes: Unusual case reports, including a *Pasteurella* infection in a flicker, are given.

1365. Wijewardana, T.G., M.C.L. DeAlwis and A.A. Vipulasiri. 1982. An agar gel-diffusion test for the rapid identification of *Pasteurella multocida* type B (Carter). Sri Lanka Veterinary Journal 30(1):12-14.

Keywords: serotype B, serotyping, agar gel immunodiffusion, capsular antigen, strain comparison, radial immunodiffusion, hemorrhagic septicemia, Asia

Notes: All type B strains isolated from cases of hemorrhagic septicaemia in Asia produced precipitin reactions specific to type B capsular antigens when tested in agar gel double diffusion and radial immunodiffusion tests.

1366. Wilkie, B.N. and R.J.F. Markham. 1979. Sequential titration of bovine lung and serum antibodies after parenteral or pulmonary inoculation with *Pasteurella haemolytica*. American Journal of Veterinary Research 40:1690-1693.

Keywords: related bacteria, P.haemolytica, antibody, serology, lung, humoral immunity, immunity, vaccine, immunization

Notes: Serum and lung antibody were induced by subcutaneous or intrabronchial inoculation of calves with formalinized *P. haemolytica*. Serum antibody was more persistent than was lung antibody.

1367. Williams, E.S., D.E. Runde, K. Mills and L.D. Holler. 1987. Avian cholera in a Gyrfalcon (*Falco rusticolus*). Avian Diseases 31(2):380-382.

Keywords: case report, Falco rusticolus, gyrfalcon, mallard, Anas platyrhynchos, transmission, Canada goose, Branta canadensis, raptor, Wyoming, duck, host range, wild bird, wild turkey, Meleagris gallopavo, waterfowl, falcon, goose, turkey, serotype 1

Notes: P.M. serotype 1 was isolated from the tissues of a 2-year-old female gyrfalcon that had consumed an infected waterfowl 48 hours previously.

1368. Wilson, S.S. 1979. A bibliography of reference to avian cholera. U.S. Fish and Wildlife Service. Special Scientific Report Wildlife No.217:1-18.

Keywords: review, wild bird, waterfowl, duck, goose, host range

Notes: Citations concerning avian cholera are included in this original bibliography.

1369. Windingstad, R.M. 1988. Nonhunting mortality in sandhill cranes. Journal of Wildlife Management 52(2):260-263.

Keywords: crane, sandhill crane, waterfowl, wild bird

Notes: Avian cholera was one of the leading causes of nonhunting mortality of 170 sandhill cranes necropsied between 1976 and 1985.

1370. Windingstad, R.M., S.M. Kerr, R.M. Duncan and C.J. Brand. 1988. Characterization of an avian cholera epizootic in wild birds in western Nebraska. Avian Diseases 32(1):124-131.

Keywords: wild bird, host range, Nebraska, Wyoming, waterfowl, duck, mallard, Anas platyrhynchos, wild turkey, Meleagris gallopavo, bald eagle, eagle, turkey, Haliaeetus leucocephalus, serotype 1, environment, stress, temperature, cattle, transmission, serotyping, serotype 3, virulence, strain comparison, Rainwater Basin, water, water quality, northern pintail, Anas acuta, American wigeon, Anas americana, black-billed magpie, Canada goose, Branta canadensis, Pica pica

Notes: An estimated 2,500 birds died in western Nebraska and eastern Wyoming in late 1985. The weather was cold and wet. There was no similarity between the P.M. isolate obtained from dead birds and those obtained from feedlot cattle in the area.

1371. Windingstad, R.M., J.J. Hurt, A.K. Trout and J. Cary. 1984. Avian cholera in Nebraska's rainwater basin. Transactions of the North American Wildlife and Natural Resources Conference 49:576-583.

Keywords: mallard, Anas platyrhynchos, northern pintail, Anas acuta, greater white-fronted goose, environment, water quality, Rainwater Basin, Nebraska, Anser albifrons, Canada goose, Branta canadensis, American widgeon, Anas americana, snow goose, Chen caerulescens, water chemistry, host range, case report, waterfowl, wild bird, duck, goose

Notes: Investigations of the water quality in the Rainwater Basin were done to determine if differences existed between areas of high and low avian cholera incidence.

1372. Windingstad, R.M., R.M. Duncan and D. Thornburg. 1983. Outbreak of avian cholera on the wintering grounds of the Mississippi Valley Canada goose flock. Journal of Wildlife Diseases 19(2):95-97.

Keywords: case report, Canada goose, Mississippi Valley, Illinois, wild bird, Branta canadensis, host range, mallard, Anas platyrhynchos, lead poisoning, black duck, Anas rubripes, snow goose, Anser caerulescens, duck, goose, waterfowl

Notes: The first observation of avian cholera in Canada geese of the Mississippi Valley population is reported.

1373. Winterfield, R.W. 1966. Notable advances made in turkey vaccination. Poultry Meat 41(2):A56,A60,-A62,A64.

Keywords: treatment, vaccine, immunization, turkey

Notes: A review is presented of advances made in turkey vaccination.

1374. Wobeser, G., F.A. Leighton, A.D. Osborne, D.J. Nieman and J.R. Smith. 1982. Avian cholera in waterfowl in Western Canada, 1978-1981. Canadian Field-Naturalist 96(3):317-322.

Keywords: P.anatipestifer, case report, Canada, Saskatchewan, wild bird, lesser snow goose, host range, Anser caerulescens caerulescens, Ross' goose, Anser rossii, waterfowl, goose, related bacteria

Notes: Avian cholera occurred each spring between 1978 and 1981 among waterfowl in west-central Saskatchewan.

1375. Wobeser, G., F.A. Leighton and R.J. Cawthorn. 1981. Occurrence of Sarcocystis Lankester, 1882, in wild geese in Saskatchewan. Canadian Journal of Zoology 59(8):1621-1624.

Keywords: Sarcocystis, lesser snow goose, Anser caerulescens caerulescens, Branta canadensis, Canada goose, parasite, host range, wild bird, Anser rossii, Ross' goose, Canada, Saskatchewan, case report, waterfowl, goose, secondary infection

Notes: Skeletal and cardiac muscle from wild geese that died of avian cholera was examined and sarcocysts were found in lesser snow geese, Ross' geese and Canada geese collected in central Saskatchewan. Two types of microcysts were present.

1376. Wobeser, G., D.B. Hunter, B. Wright, D.J. Nieman and R. Isbister. 1979. Avian cholera in waterfowl in Saskatchewan, spring 1977. Journal of Wildlife Diseases 15(1):19-24.

Keywords: house sparrow, Passer domesticus, chicken, mallard, Anas platyrhynchos, Anas strepera, transmission, virulence, American coot, Fulica americana, redhead, Aythya americana, American widgeon, Anas americana, gadwall, case report, wild bird, host range, Canada, Saskatchewan, Anser c.caerulescens, lesser snow goose, Canada goose, Branta canadensis, Anser rossii, Ross' goose, clinical sign, waterfowl, goose, sparrow, duck

Notes: An avian cholera outbreak affected lesser snow geese, Ross' geese and several other waterfowl species in Saskatchewan in the spring of 1977.

1377. Wobeser, G. and G.E. Ward. 1974. *Pasteurella anatipestifer* infection in migrating whistling swans. Journal of Wildlife Diseases 10:466-470.

Keywords: whistling swan, Canada, wild bird, case report, Saskatchewan, related bacteria, Olor columbianus, host range, waterfowl, P.anatipestifer, swan

Notes: *P. anatipestifer* was isolated from five juvenile whistling swans in Saskatchewan.

1378. Wong, J.C.S. and C.J. Kucera. 1982. Cross-protection by a chemically altered vaccinal strain of *Pasteurella multocida* in mice and hamsters. American Journal of Veterinary Research 43(7):1315-1316.

Keywords: cross protection, mice, hamster, immunization, serotype A, serotype B, serotype E, vaccine, mutant

Notes: Mice and hamsters vaccinated with a chemically altered type A strain of P.M. were protected against homologous and heterologous challenge exposure to type A, B, and E.

1379. Woolcock, J. and F.M. Collins. 1976. Immune mechanism in *Pasteurella multocida*-infected mice. Infection and Immunity 13(3):949-958.

Keywords: mice, adjuvant, passive immunity, immunization, vaccine

Notes: Various immunizing procedures were tested for their effect on the growth of P.M. in mice.

1380. Wu, T., L. Miao, J.S. Liu, Q.M. Zhu, X. Dai, C. Liu and X.Y. Zhang. 1986. *Pasteurella multocida* capsular polysaccharide vaccine against fowl cholera. Production and testing of the vaccine (Chinese). Chinese Journal of Veterinary Science and Technology 5:3-7.

Keywords: vaccine, capsular antigen, polysaccharide

Notes: (ONS)

1381. Wu, T., L. Miao, J.S. Liu, Q.M. Zhu, X. Dai, C. Liu and X.Y. Zhang. 1986. Typing 28 strains of *Pasteurella multocida* of avian origin by agar diffusion with their heat-extracted antigens (Chinese). Chinese Journal of Veterinary Science and Technology 6:3-5.

Keywords: serotyping, antigen isolation, agar gel immunodiffusion

Notes: (ONS)

1382. Wu, Z.J., L.Q. Wu and B.X. Cai. 1986. Comparison between primary and secondary immune responses in chickens vaccinated with fowl cholera attenuated vaccine prepared from *Pasteurella multocida* strain 807 (Chinese). Animal Husbandry and Veterinary Medicine 18(2):54-56.

Keywords: vaccine, immunization, chicken

Notes: (ONS)

1383. Yadav, M.P., V.D. Sharma and M.S. Sethi. 1977. An outbreak of fowl cholera due to *Pasteurella gallinarum* in Uttar Pradesh (India). Avian Diseases 21(2):323-325.

Keywords: case report, related bacteria, P.gallinarum, India, Uttar Pradesh, chicken

Notes: *P. gallinarum* was isolated in pure culture from the heart blood of two moribund chicks in India.

1384. Yadin, H., D.J. VanRoozelaar and L. Moraal. 1979. Fowl cholera: preventive treatment with antibiotics. Tijdschrift voor Diergeneeskunde 104(6):263-267.

Keywords: treatment, antibiotic, chlortetracycline, oxytetracycline, neomycin, chloramphenicol, duck, turkey, antibiotic sensitivity

Notes: Various combinations of antibiotics and their effective dosages in food and drinking water were determined for successful treatment of avian cholera in ducks and turkeys.

1385. Yadin, H. and L.G. Moraal. 1978. Serological typing of isolates of *Pasteurella multocida* from poultry and other animals in the Netherlands (Dutch/E). Tijdschrift voor Diergeneeskunde 103(15):783-787.

Keywords: serotyping, vaccine, strain comparison, Netherlands

Notes: Serological typing was done on isolates of P.M. from poultry, birds and mammals.

1386. Yang, X.Y. 1982. Poultry biologicals used in China (Chinese). Chinese Journal of Veterinary Medicine 8(7):42-43.

Keywords: vaccine, China

Notes: Biological reagents (e.g., vaccines for avian cholera, Newcastle disease, and fowl pox) produced and/or used in China are listed.

1387. Yanluzov, J. 1977. Changes in the cell composition of the lymph organs in the course of the infectious and immunizatory processes of chicken cholera. Obshta i Sravnitelna Patologiya 4:29-35.

Keywords: vaccine, immunization, thymus, bursa of Fabricius, chicken, hematology, pathology

Notes: Cytological study of the spleen, thymus and bursa of vaccinated, clinically affected and infected but asymptomatic birds showed slight changes in the lymphoid and plasma cells of the spleen and thymus but no changes in the bursa.

1388. Yanluzov, J. 1977. Changes in the blood count in the course of the infectious and immunizatory processes of chicken cholera. Obshta i Sravnitelna Patologiya 4:21-28.

Keywords: Salmonella gallinarum, vaccine, immunization, thymus, bursa of Fabricius, chicken, pathology, hematology, secondary effect

Notes: Blood cell counts were similar in both infected and vaccinated chickens

1389. Yarnykh, V.S., P.N. Rubchenkov and N.A. Shurduba. 1975. Ultrastructure of lyophilized cells of Pasteurella avium vaccine strain following the rehydration and in the aerosol state (Russian/E). Problemy Veterinarnoi Sanitarii 51:156-165.

Keywords: vaccine, aerosol, ultrastructure, cell wall, lyophilization, P.avium

Notes: Rehydration resulted in restoration of cell structure, hydration of the necleoid, and disruptions of the cell wall. Following aerosolization, there was disruption of the plasma membrane as well as destruction of the cell wall.

1390. Yartsev, M.Y., E.P. Sapegina, B.E. Blekherman, R.V. Dushuk and N.V. Lordkipanidze. 1986. Biological properties of vaccine strains of Pasteurella at different stages of growth in culture (Russian). Veterinariya (Moscow) 9:32-36.

Keywords: vaccine, growth, ultrastructure

Notes: Growth curves and ultrastructure of vaccine strains are described.

1391. Yaw, K.E. and J.C. Kakavas. 1957. A comparison of the protection-inducing factors in chickens and mice of a type 1 strain of Pasteurella multocida. American Journal of Veterinary Research 18(69):661-664.

Keywords: immunization, capsular antigen, lipopolysaccharide, vaccine, strain comparison

Notes: Crude preparations of capsular polysaccharide from a type 1 strain of P.M. protected chickens and mice against challenge with this strain.

1392. Yaw, K.E., L. Briefman and J.C. Kakavas. 1956. A comparison of virulence for mice and chickens of different colonial variants of the three serological types of Pasteurella multocida. American Journal of Veterinary Research 17(62):157-159.

Keywords: immunization, virulence, cross protection, strain comparison, vaccine, mice, chicken, colony morphology

Notes: The type 1 encapsulated variant was found to be most virulent for chickens and mice.

1393. Yin, Q.Y. 1984. Survey of the sensitivity of Pasteurella multocida to some common antimicrobial drugs (Chinese). Journal of Veterinary Science and Technology 5:31-34.

Keywords: antibiotic, antibiotic sensitivity

Notes: (ONS)

1394. Yuroukov, M., K.D. Fan and L. Karaivanov. 1983. Passive hemagglutination test with capsular and somatic antigens of Pasteurella multocida strains isolated from poultry (Bulgarian/E). Veterinarno-Meditsinski Nauki 20(8):85-92.

Keywords: hemagglutination, capsular antigen, somatic antigen, strain comparison, serotype A, serotype B, agar gel immunodiffusion, antigen, preparation, chicken, rabbit

Notes: Out of 34 strains, 76 percent were typable with the use of capsular extracts and 97 percent with thermostable somatic extracts as antigens in the passive hemagglutination test.

1395. Yurukov, M. 1986. The antigenic structure of some Pasteurella multocida strains. Veterinarno-Meditsinski Nauki 23(10):18-25.

Keywords: antigen, swine, agar gel immunodiffusion, serotyping

Notes: (ONS)

1396. Zaher, A., M.S. ElSabban, A. Geneidy, I.M. Sadek, M.A. ElAgroudi and O. Lotfy. 1974. Studies on Pasteurella multocida. The production of an oil adjuvant vaccine against Pasteurella infection in turkeys. Journal of the Egyptian Veterinary Medical Association 34(3/4):80-88.

Keywords: vaccine, adjuvant, turkey, immunization

Notes: (ONS)

1397. Zarzara, C., S. Sandulescu and E. Constantinescu. 1985. Maintenance and transmission of the agents of fowl typhoid and fowl cholera by Cimex in poultry houses (Romanian/E). Lucrarile Institutului de Cercetari Veterinare si Biopreparate "Pasteur" 17:265-269.

Keywords: transmission, Salmonella gallinarum, vector, Cimex lectularius, parasite, reservoir

Notes: P.M. persisted in Cimex lectularius for 24 hours. Attempts at oral or transcutaneous transmission of the organisms by the insects gave negative results.

1398. Zav'yantsev, V.E. 1981. Therapeutic and prophylactic efficacy of antibiotics in experimental pasteurellosis and coli septicaemia in chicks (Russian). Byulleten Vsesoyuznogo Instituta Eksperimental'noi Veterinarii 42:54-57.

Keywords: antibiotic, chicken, Escherichia coli, related bacteria, treatment, prevention

Notes: Antibiotics were tested for use in chickens.

1399. Zebrowski, L., H. Majewska and Z. Byczynski. 1964. Investigations on the variability of the pathogenicity of Newcastle disease virus (NDV). IV. Influence of bacterial infection (Pasteurella multocida) and parasitic invasion (Ascaridia galli). Acta Microbiolgica Polonica 13(3):205-210.

Keywords: Newcastle disease virus, Ascaridia galli, immunosuppression, virulence, secondary infection

Notes: A virulent strain of Newcastle disease virus could not be attenuated by passage through chickens previously infected with P.M. or Ascardidia galli.

1400. Zeljko, M. 1972. Checking of the value of preparations Trivetrin and Tribrissen in different infections of swine, calves, and piglets in practice (Serbo-Croatian/E). Veterinarski Glasnik 26(5):351-355.

Keywords: treatment, antibiotic, chicken, trimethoprim, sulfadiazine, Tribrissen, Trivetrin, swine, cattle, field test, sulfonamide

Notes: Good results were claimed for the treatment of 290 pigs with Glasser's disease (plyserositis), colibacteriosis swine dysentary, and in respiratory pasteurellosis in calves and avian cholera.

1401. Zhang, B.Y., H.Z. Liang, J.S. Liu, Y. Song, G.Y. Long, Y. Yu, Y.L. Gao, S.B. Zhan and Z.G. Wang. 1984. Study on attenuated strains of fowl cholera-field immunity trial of the PTR and PC strains (Chinese). Journal of Veterinary Science and Technology 12:3-8.

Keywords: vaccine, immunization

Notes: (ONS)

1402. Zhang, M. 1984. Serotyping of Pasteurella multocida isolated from poultry in China (Chinese/E). Acta Veterinaria et Zootechnica Sinica 1591):51-56.

Keywords: serotyping, capsular antigen, somatic antigen, chicken, strain comparison, serotype A, serotype 5

Notes: Most of the 111 avian strains of P.M. serotyped belonged to capsular type A and somatic type 5.

1403. Zhang, P.C. 1983. Immunization test of polyvalent fowl-cholera bacterins (Chinese). Chinese Journal of Veterinary Medicine 9(11):49-51.

Keywords: vaccine, strain comparison, chicken

Notes: The use of polyvalent vaccines is reported.

1404. Zharov, V.G. and A.A. Polyakov. 1959. Survival of Pasteurella septica in carcasses of fowls (Russian). Trudy, Vsesoyuznyi Institut Veterinarnoi Sanitarii i Ektoparasiti 14:47.

Keywords: survival, P.septica, chicken, carcass

Notes: (ONS)

1405. Zhekov, S. and L. Karaivanov. 1973. Study of the O-antigens of some Pasteurella multocida strains and their relation to immunogenicity (Bulgarian/E). Veterinarno-Meditsinski Nauki 10(8):3-9.

Keywords: serotyping, strain comparison, capsular antigen, immunization, agglutination, chicken

Notes: Six strains of P.M. isolated from chickens all possessed O-antigen, but the amount varied between strains. The O-antigen content was related to immunogenicity but not to serotype.

1406. Zhekov, S. 1969. A study of avirulent strains of Pasteurella multocida (Bulgarian/E). Veterinarno-Meditsinski Nauki 6(2):53-60.

Keywords: avirulent, strain comparison, chicken, rabbit, virulence, immunogenicity, capsule, biochemical test, pigeon

Notes: Five strains of P.M., three isolated from dead, asymptomatic hens and two from rabbits, were found to be avirulent for chickens and pigeons. One strain was highly immunogenic. No capsules were observed on any of the strains, and no alterations in fermentation reactions were demonstrated.

1407. Zhekov, S. 1968. Immunological study of Pasteurella multocida strains, isolated in Bulgaria (Bulgarian/E). Veterinarno-Meditsinski Nauki 5(10):53-61.

Keywords: strain, cross protection, swine, strain comparison, passive immunity

Notes: Isolates from poultry and pigs were compared by a serological cross-protection test in mice. Type-specific sera provided only partial protection against all strains.

1408. Zheng, M. 1984. Serotyping of Pasteurella multocida isolated from poultry in China (Chinese/E). Acta Veterinaria et Zootechnica Sinica 15(1):51-56.

Keywords: serotyping, somatic antigen, capsular antigen, strain comparison, serotype 5, serotype A

Notes: A total of 111 strains of P.M. of avian origin in China were serotyped. Six isolates could not be grouped; the rest were capsular type A. All isolates but one were somatic type 5.

1409. Zheng, Y.M., D.Y. Fang, M.J. Jiang and Y.S. Zhou. 1982. Studies on tissue vaccines for fowl cholera (Chinese). Chinese Journal of Veterinary Medicine 8(7):47-48.

Keywords: vaccine, immunization

Notes: The use of infected tissues as vaccines is presented.

1410. Zhokovski, N. and M. Ignatov. 1973. Changes in the protein fractions of blood serum of chickens vaccinated against pasteurellosis (Bulgarian/E). Veterinarno-Meditsinski Nauki 10(2):75-81.

Keywords: immunity, immunization, killed vaccine, live vaccine, serum protein, electrophoresis, chicken, secondary effect

Notes: Electrophoresis of serum from chickens vaccinated with live or killed vaccines showed a common pattern of changes in the gamma globulin and albumin fractions, which correlated with protection against challenge. The changes in the serum protein fractions were useful in monitoring vaccination and immunity.

1411. Zhokovski, N., L. Karaivanov and T.S. Tsonev. 1972. Comparative studies of two strains of Pasteurella multocida isolated from chicken and swine (Russian). Veterinarna Sbirka 69(1):16-18.

Keywords: chicken, strain comparison, swine

Notes: Two strains of P.M., isolated from a chicken and a pig, were compared.

1412. Zimmerman, M.L. and D.C. Hirsh. 1980. Demonstration of an R plasmid in a strain of Pasteurella haemolytica isolated from feedlot cattle. American Journal of Veterinary Research 41(2):166-169.

Keywords: related bacteria, antibiotic resistance, ampicillin, P.haemolytica, tetracycline, streptomycin, antibiotic, plasmid, cattle, beta-lactamase, pneumonia

Notes: A strain of P. hemolytica isolated from feedlot cattle with pneumonia was resistant to three antibiotics. Resistance to tetracycline and streptomycin was plasmid-mediated. Resistance to ampicillin was mediated by a beta-lactamase.

1413. Zinkl, J.G., J.J. Hurt, J.M. Hyland, N. Dey, D. Studnicka and D.D. King. 1977. Treatment of captive giant Canada geese affected by avian cholera. Journal of Wildlife Diseases 13(3):294-296.

Keywords: wild bird, case report, detection, treatment, Nebraska, host range, Corvus brachyrhynchos, giant Canada goose, Branta canadensis maxima, wood duck, Aix sponsa, crow, waterfowl, goose

Notes: An outbreak of avian cholera in 1975 affected giant Canada geese, common crows and wild waterfowl. The procedures used to diagnose, treat, control, and prevent the recurrence of the disease in the captive geese are described.

1414. Zinkl, J.G., N. Dey, J.M. Hyland, J.J. Hurt and K.L. Heddleston. 1977. An epornitic of avian cholera in waterfowl and common crows in Phelps County, Nebraska, in the spring, 1975. Journal of Wildlife Diseases 13(2):194-198.

Keywords: sandhill crane, Grus canadensis, ruddy duck, Oxyura jamaicensis, pied-billed grebe, Podilymus podiceps, merganser, Mergus merganser, ring-necked duck, Aythya collaris, bufflehead, Bucephala albeola, lesser scaup, Aythya affinis, redhead, Aythya americana, canvasback, Aythya valisneria, case report, host range, transmission, wild bird, Nebraska, crow, Corvus brachyrhynchos, giant Canada goose, Branta canadensis maxima, American coot, Fulica americana, white fronted goose, Anser albifrons, Canada goose, Branta canadensis, mallard, Anas platyrhynchos, pintail, Anas acuta, American widgeon, Anas americana, green-winged teal, Anas carolinensis, snow goose, Chen hyperborea, gadwall, Anas strepera, northern shoveler, Anas clypeata, blue-winged teal, Anas discors, wood duck, Aix sponsa, waterfowl, serotype 1, duck, goose, crane, teal

Notes: Isolation of P.M. serotype 1 confirmed the diagnosis of acute and chronic avian cholera in 25,000 waterfowl and at least 3,000 crows found dead in Nebraska.

1415. Ziv, G. 1980. Preliminary clinical pharmocological investigations of tylosin and tiamulin in chickens. Veterinary Quarterly 2(4):206-210.

Keywords: antibiotic, antibiotic sensitivity, chicken, tylosin, tiamulin, treatment, mycoplasma

Notes: The minimal inhibitory concentrations of tiamulin and tylosin for mycoplasma, and gram-positive and gram-negative microorganisms isolated from chickens were determined by the agar dilution method.

1416. Zolli, E. and D.E. Polewaczyk. 1970. Study of the use of spectinomycin in the control of some diseases in poultry. (Chronic respiratory disease (*Escherichia coli*), *Salmonella typhymurium*, Arizona group of infections and fowl cholera) (Serbo-Croatian/E). Veterinarski Glasnik 24(9):671-678.

Keywords: chicken, turkey, antibiotic sensitivity, spectinomycin, treatment, antibiotic

Notes: All of the diseases listed were effectively controlled in lab and field tests by the use of injected spectinomycin.

1417. Zuydam, D.M. 1952. Penicillin as therapeutic in fowl cholera (Dutch/E). Tijdschrift voor Diergeneeskunde 77:256-257.
Keywords: antibiotic, chicken, penicillin, treatment

Notes: Penicillin was successfully used in chickens to treat avian cholera.

1418. Zuydan, V.I. 1964. Sulfamethoxypyridazine for treatment of pasteurellosis of poultry (Russian). Ptitsevodstvo 9:33.

Keywords: sulfamethoxypyridazine, antibiotic, sulfonamide, chicken, treatment

Notes: Sulfamethoxypyridazine was used in the treatment of avian cholera.

1419. Zuydan, V.I. 1964. Efficacy of tetracycline in the treatment of avian pasteurellosis (Russian/E). Antibiotiki 9(2):161-165.

Keywords: chicken, P.avium, antibiotic, treatment

Notes: *P. avium* was sensitive to tetracycline administered intramuscularly in a single dose of 15-20 mg/kg body weight.

1420. Zuydan, V.I. 1963. Tetracycline in avian pasteurellosis (Russian). Veterinariya (Moscow) 40(12):52-56.

Keywords: tetracycline, chicken, treatment, antibiotic

Notes: The use of tetracycline to treat avian cholera is reported.

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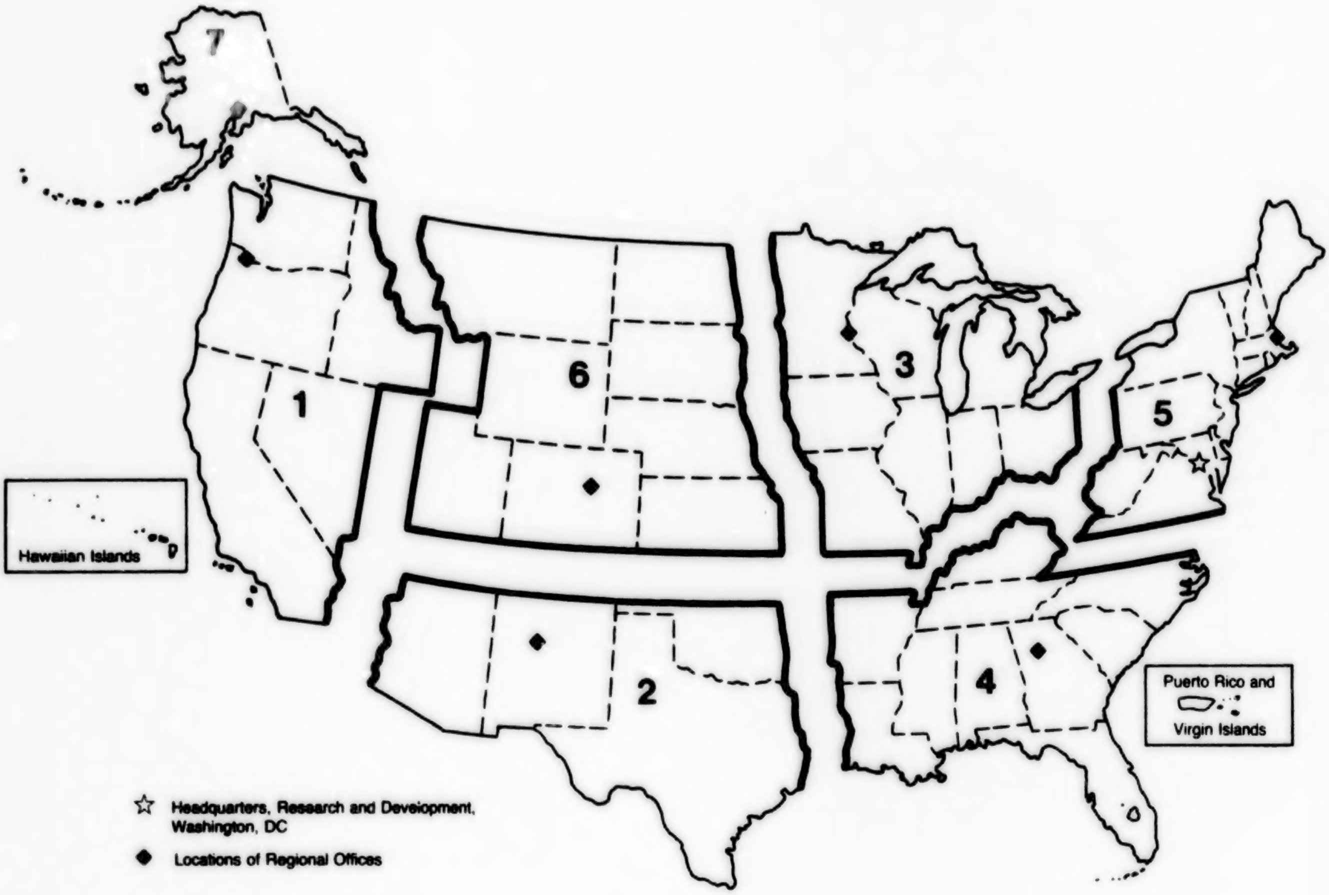
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